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OF THE

TWENTIETH LEGISLATURE

OF THE

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1941

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REPORTS

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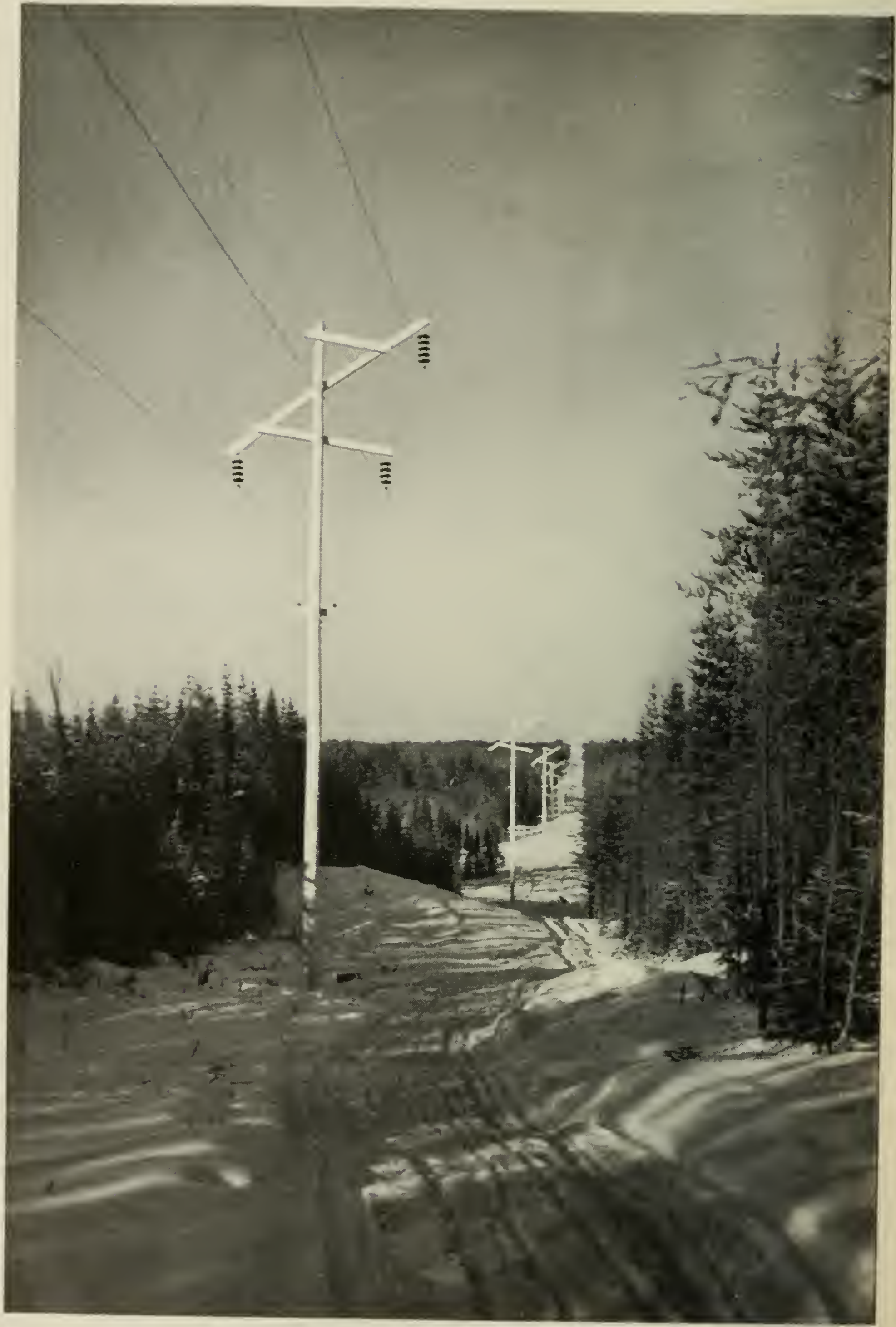

PIONEER POWER LINES IN NORTHERN ONTARIO
Typical wishbone pole on 66,000-volt transmission line,
Uchi Junction to Crow River transformer station,
Northern Ontario Properties

THIRTY-SECOND ANNUAL REPORT

OF

THE HYDRO-ELECTRIC POWER COMMISSION OF ONTARIO

FOR THE YEAR ENDED OCTOBER 31st

1939

ONTARIO

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PRINTED BY ORDER OF
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1940

THE HYDRO-ELECTRIC POWER COMMISSION
OF ONTARIO

T. H. Hogg, B.A.Sc., C.E. D.Eng	*Chairman and Chief Engineer*
Hon. Wm. L. Houck, B.Sc., M.L.A	*Vice-Chairman*
J. Albert Smith, M.L.A	*Commissioner*
Osborne Mitchell	*Secretary*

CHAIRMAN'S LETTER OF TRANSMITTAL

To His Honour
The Honourable Albert Matthews, LL.D.,
Lieutenant-Governor of Ontario

May It Please Your Honour:

The undersigned respectfully presents the Thirty-Second Annual Report of The Hydro-Electric Power Commission of Ontario for the fiscal year which ended October 31, 1939.

The record of the Commission's work presented in this Annual Report relates to three principal fields—the co-operative municipal field, the field of rural supply, and the northern Ontario field. The first two cover the Commission's activities on behalf of the co-operative systems, and the last relates to its trusteeship of the Northern Ontario Properties on behalf of the Province. Throughout the various sections of the Report dealing broadly with physical operation of the plants, constructional activities and financial statements, these fields of activity are clearly differentiated.

The Report also presents for the calendar year 1939 financial statements and statistical data relating to the municipal electric utilities operating in conjunction with the several co-operative systems for the supply of electrical service throughout the Province.

Notwithstanding the tense European situation, which over-shadowed activity everywhere, the fiscal year of The Hydro-Electric Power Commission of Ontario, which ended October 31, 1939, was a year of encouraging progress. Towards the latter part of the year, before war was declared, it became increasingly evident that the recession of 1938 had passed and peaceful industry was making progress towards better times.

Operating Conditions

Throughout the year, operating conditions were most favorable. No serious interruptions to service on any part of the Commission's undertaking occurred and all primary and secondary demands for power were satisfactorily met. The operation of all generating stations was especially free from ice trouble during the winter and spring break-up and practically no loss in generating capacity resulted from this cause.

In the Georgian Bay system, river flow and water storage were generally above normal until September when low precipitation impaired storage.

During the greater portion of the year it was necessary to supplement the system's internal power resources by transfer from the Niagara system through the Hanover frequency-changer.

The output available from the generating stations of the Eastern Ontario system enabled all primary demands to be met. In addition the system furnished certain quantities of secondary power. The demands for secondary power were filled in part by transfer from the Niagara system.

In the Thunder Bay system and Northern Ontario Properties, water storage and stream flow conditions were in general satisfactory. Towards the end of the year it was considered advisable to limit the outflow from lake Nipigon to the generating stations of the Thunder Bay system in order to conserve water storage in this basin.

The districts served by the Northern Ontario Properties are scattered over wide areas of northern Ontario and long transmission lines have been built to connect these districts with the various sources of hydro-electric power. Owing to the great distances involved, it is not economically practicable at the present time to weld the whole of the transmission networks of the Northern Ontario Properties into one physical entity. As time goes on, however, and more mining areas are developed at intermediate points, it is certain that interconnection of the districts will be accomplished to a greater degree. During the past year, for example, the Patricia and St. Joseph districts, which obtain their power supplies from the Ear Falls and Rat Rapids developments, were combined and connected by a transmission line extending from Uchi to Crow river, a distance of 113 miles. This connecting link enables the two developments at Ear Falls and Rat Rapids to be operated in parallel and thus to reinforce each other, providing a more reliable service.

Similarly in the Nipissing and Sudbury districts, interconnection has been arranged between the power plants on the South river serving the Nipissing district and those on the Wanapitei river serving the Sudbury district with 60-cycle power.

Load Conditions

Evidence of the increasing industrial activity throughout the Province was reflected in increasing power loads. In fact, for some months prior to the declaration of war, Hydro experienced substantial increase in loads, and not Hydro alone, but other electric supply organizations across Canada. Since the War started these increases in load not only continued, but were augmented as plants manufacturing war materials gradually increased their production.

It will be remembered that, due to the business recession of 1938, the primary power demand of the large Niagara system was virtually the same in October 1938 as in October 1937. But in October 1939, the corresponding power demand of the Niagara system reached 1,228,000 horsepower, an increase of 142,000 horsepower or 13 per cent, as compared with October 1938.

The other co-operative systems of the Commission, as well as the Northern Ontario Properties, recorded substantial increases in load.

The aggregate primary loads of the co-operative systems and the Northern Ontario Properties increased from 1,484,615 horsepower in October 1938 to 1,669,337 horsepower in October of the current year, a gain of 12.4 per cent. The primary load trend, which had shown a negligible rise in the previous year, started to point upwards at the close of 1938 and since has steadily gained ground. In the co-operative systems, commercial, domestic and rural demands have largely contributed to the upward trend, further aided in the last two months of the Commission's fiscal year by increases in industrial demands.

The total load in October 1939 for all co-operative systems and the Northern Ontario Properties, including both primary and secondary loads, was 1,963,471 horsepower, the highest ever carried by the systems of the Commission and 7.2 per cent above the October peak of 1938. The total consumption of energy for all systems, including both primary and secondary power, amounted to 8,502,000,000 kilowatt-hours, being 12.1 per cent in excess of that consumed in the previous year. This means that the greater portion of the Commission's power reserves, especially in the large Niagara system, found a ready sale in the secondary power market during the year.

Increased Mining Loads

During the past year progress in the Northern Ontario mining fields has continued the phenomenal growth experienced for several years. This growth has resulted in a great increase in the demand for Hydro power. From October 1938 to October 1939, the total primary load in the districts served by the Northern Ontario Properties rose from 145,000 horsepower to 168,000 horsepower, an increase of 16 per cent; this followed increases of 19.6 per cent in 1938 and 19.7 per cent in 1937. The total increase in primary load of the Northern Ontario Properties during the past four years has exceeded 100,000 horsepower or more than 150 per cent. These figures include municipal loads in northern Ontario but do not include the loads sold in the Beardmore and Longlac mining areas, which are supplied by the Thunder Bay system. The actual increase in the total load sold to mining companies during the fiscal year was 23,801 horsepower, from 127,986 horsepower to 151,787 horsepower or 18.6 per cent.

The increased load sold to mining properties in 1939 over 1938 for the Abitibi district, including the mining camps at Porcupine, Kirkland Lake, and Larder Lake, Matachewan, Ramora and Sudbury was 20,108 horsepower. The increased load sold in 1939 in the Patricia-St. Joseph district, which includes the Red Lake, Woman Lake and Pickle Lake mining areas, was 3,612 horsepower. The increase in the 60-cycle load sold to mining properties in the Sudbury district was 81 horsepower.

Taking into consideration the mining properties which had been abandoned or closed down, the total number of active contracts at October 31, 1939 was 54, a net increase of six during the year.

The accompanying tabulation gives, for the months of October and December, 1938 and 1939, the primary peak loads of the co-operative systems and of the several districts of the Northern Ontario Properties. It also gives similar data for the total primary and secondary loads.

DISTRIBUTION OF PRIMARY POWER TO SYSTEMS

20-Minute Peak Horsepower—System Coincident Primary Peaks

System	1938	1939
	October	
Niagara system—25-cycle	1,040,214	1,171,582
Dominion Power & Transmission division—66⅔-cycle	46,515	56,970
Georgian Bay system	30,891	34,756
Eastern Ontario system	128,586	141,908
Thunder Bay system	93,606	96,160
Manitoulin rural power district	205	273
Northern Ontario Properties:		
Nipissing district	4,857	5,188
Sudbury district	17,895	19,740
Abitibi district	113,160	130,968
Patricia-St. Joseph district	8,686	11,792
Total	1,484,615	1,669,337
	December	
Niagara system—25-cycle	1,112,466	1,253,754
Dominion Power & Transmission division—66⅔-cycle	48,123	59,249
Georgian Bay system	34,011	37,642
Eastern Ontario system	132,001	145,542
Thunder Bay system	83,773	85,328
Manitoulin rural power district	257	306
Northern Ontario Properties:		
Nipissing district	5,255	5,232
Sudbury district	17,954	20,275
Abitibi district	124,203	145,703
Patricia-St. Joseph district	9,196	12,440
Total	1,567,239	1,765,471

Additions to Generating, Transmission and Distribution Equipment

No extensions to generating equipment were made in connection with the co-operative systems in 1939, but at DeCew Falls additional pondage was provided and elsewhere studies were made relating to possible future development. These studies dealt with power sites on the Musquash river in the Georgian Bay system, on the Madawaska river in the Eastern Ontario system, and on the Nipigon river in the Thunder Bay system.

In the Toronto suburban area a new transformer station with an initial capacity of 50,000 kv-a in two units was authorized. It is known as the Toronto-Fairbank transformer station and will supply power to the northern suburban districts of Toronto and to various municipalities between Toronto and lake Simcoe. A transformer station is being constructed near Simcoe to improve the power supply to municipalities south of Brant transformer station, and another at the Ontario Paper Co. plant in Thorold. Additional capacity was installed where required in other transformer stations.

DISTRIBUTION OF POWER TO SYSTEMS—PRIMARY AND SECONDARY

20-MINUTE PEAK HORSEPOWER—SYSTEM COINCIDENT PRIMARY PEAKS

System	1938	1939
	October	
Niagara system—25-cycle	1,259,115	1,358,177
Dominion Power & Transmission division 66⅔-cycle	46,515	56,970
Georgian Bay system	30,891	34,756
Eastern Ontario system	159,249	168,958
Thunder Bay system	131,394	118,740
Manitoulin rural power district	205	273
Northern Ontario Properties:		
Nipissing district	4,857	5,188
Sudbury district	17,895	19,740
Abitibi district	172,409	188,877
Patricia-St. Joseph district	8,686	11,792
Total	1,831,216	1,963,471
	December	
Niagara system—25-cycle	1,359,786	1,448,928
Dominion Power & Transmission division 66⅔-cycle	48,123	59,249
Georgian Bay system	34,011	38,145
Eastern Ontario system	161,103	155,214
Thunder Bay system	132,399	122,413
Manitoulin rural power district	257	306
Northern Ontario Properties:		
Nipissing district	5,255	5,232
Sudbury district	17,954	20,275
Abitibi district	185,999	197,982
Patricia-St. Joseph district	9,196	12,440
Total	1,954,083	2,060,184

Twenty-three new distributing stations were installed or under construction during the year, and the transformer capacity of twenty-five other distributing stations was increased. About 31 miles of new transmission lines were placed in service and many revisions and improvements to existing lines were made.

To provide for the growth in load in the mining areas served by the Northern Ontario Properties, it has been necessary for the Commission constantly to increase generating plant capacity, to construct additional transmission lines, to enlarge existing and construct new transformer stations and, in general, to rearrange in many instances the entire set-up under which power delivery has been made. In fact, the increase in the power demand from both existing and new mining properties has been so rapid that it has been difficult to provide plant and equipment fast enough to prevent embarrassment to mining operations, from the standpoint of power supply.

New works constructed in 1939, or under construction at the end of the year to provide for increased loads included the following:

In the Abitibi district, a new 15,000 kv-a transformer station at Timmins replacing a 9,000 kv-a station; a loop transmission line out of the Timmins transformer station; a new bank of three 9,000 kv-a transformers at Kirkland Lake, increasing its capacity to 57,000 kv-a, and a new 1,000 kv-a transformer station at Westree to supply power to the Tyranite and Ronda mines.

In the Patricia-St. Joseph district, which serves the mining areas of Red Lake, Woman Lake and Pickle Lake, a third generating unit of 7,500 horsepower was installed at the Ear Falls development and will be placed in operation early in 1940, bringing the total installed capacity at Ear Falls to 17,500 horsepower. A new 44,000-volt transmission line 48 miles in length was placed in operation between Ear Falls and Uchi mine in the Woman Lake district. The new transmission line between the Uchi mine and Crow river, near the Central Patricia mine, which forms the connecting link between the Ear Falls and Rat Rapids developments, was completed, and a 3,750 kv-a transformer station at its terminus was placed in operation in September 1939. In addition the Commission purchased all the transmission lines belonging to individual mining companies in the Red Lake district and now controls and owns all of the transmission system originating out of the Ear Falls development.

Extensions in Rural Power Districts

Applications for rural electrical service throughout the Province during 1939 equalled the annual records established the preceding two years. Approval was given for the construction of 2,300 miles of rural primary line to serve more than 13,000 additional consumers. It is anticipated that this demand for service in established rural power districts will continue on a similar scale during the year 1940, and that much new rural territory in northern Ontario will be served during the coming year.

The load required to serve these rural systems is increasing rapidly. The aggregate load supplied to all rural power districts during 1939 amounted to 61,634 horsepower, an increase of 15.5 per cent over the year 1938.

Reduced Capital Expenditure

Extensions to generating stations, transmission lines, rural distribution networks, storage works, etc., during the year necessitated a capital expenditure of $9,136,803.86 as compared with $10,876,458.83 in the previous year. Of this amount, more than half was incurred for the extension of service in rural power districts to which the Government contributed a grant-in-aid of $2,447,003.77. In the co-operative systems, apart from rural extensions, the chief capital expenditures were incurred for general extensions and additions to transmission lines and to transformer stations. In the Northern Ontario Properties, an extension to the Ear Falls development involved an expenditure of about $525,000. Other capital expenditures incurred in northern Ontario were chiefly for extensions to transmission lines and transformer stations feeding mining properties.

CAPITAL ADDITIONS YEAR ENDED OCTOBER 31, 1939

Niagara system	$ 2,253,388.55
Georgian Bay system	625,750.91
Eastern Ontario system	611,073.56
Thunder Bay system	195,938.73
Manitoulin, Nipissing & Sudbury R.P.D.'s	65,836.33
Northern Ontario Properties	2,878,565.21
Service and administrative buildings and equipment	59,246.80
	$ 6,689,800.09
Provincial rural grant (To October 31)	2,447,003.77
Total	$ 9,136,803.86

Sales Promotion

As forecast in the last Annual Report, the Commission during the year organized a Sales Promotion department, the chief function of which is to make known to all Ontario citizens the nature of the benefits which they can derive from making the fullest possible use in domestic and industrial fields, of the ample supplies of low-cost power now available. In this work a number of the municipal Hydro utilities have co-operated with successful results.

The programme for the year combined advertising with direct field work promoting the further use of electric power in agriculture, industry, commerce and the home. Interesting and worthwhile features were the domestic appliance campaign during the early summer months, the commercial lighting surveys, and the farm demonstrations in the rural areas.

Capital Investment

The total investment of The Hydro-Electric Power Commission of Ontario in power undertakings and hydro-electric railways is $321,214,964.50 exclusive of government grants in respect of construction of rural power districts' lines ($16,596,670.63); and the investment of the municipalities in distributing systems and other assets is $124,907,581.46, making in power and hydro-electric railway undertakings a total investment of $446,122,544.96.

The following statement shows the capital invested in the respective systems, districts and municipal undertakings, etc.:

Niagara system (including Hamilton street railway)	$217,771,971.53
Georgian Bay system	11,634,123.92
Eastern Ontario system	22,754,585.58
Thunder Bay system	19,935,847.95
Manitoulin rural power district	92,793.22
Nipissing rural power districts	58,808.85
Sudbury rural power district	33,544.74
Bonnechere storage	51,741.88
Office and service buildings	3,267,086.38
Construction plant and inventories	3,379,951.95
	$278,980,456.00
Northern Ontario Properties—Operated by H.E.P.C. on behalf of the Province of Ontario	39,888,835.09
Northern Ontario Properties—Construction plant and inventories	143,897.94
Toronto-Port Credit-St. Catharines Radial Railways	2,201,775.47
	$321,214,964.50
Municipalities' distribution systems	99,489,754.98
Other assets of municipal Hydro utilities	25,417,826.48
	$446,122,544.96

RESERVES OF COMMISSION AND MUNICIPAL ELECTRICAL UTILITIES

The total reserves of the Commission and the municipal electric utilities for depreciation, contingencies, stabilization of rates, sinking fund and insurance purposes, amount to $216,405,116.02, made up as follows:

Niagara system (including Hamilton street railway)	$ 87,840,119.11
Georgian Bay system	5,127,640.66
Eastern Ontario system	10,104,705.88
Thunder Bay system	6,873,698.30
Manitoulin rural power district	14,073.59
Nipissing rural power districts	15,760.82
Sudbury rural power district	2,166.88
Office and service buildings and equipment	1,065,452.15
Bonnechere storage	16,004.05
Total reserves in respect of Commission's properties	$111,059,621.44
Northern Ontario Properties	6,828,329.12
Fire insurance reserve	80,640.74
Miscellaneous reserves	635,079.83
Employers' liability insurance, and staff pension reserves	7,135,353.21
Total reserves of the Commission	$125,739,024.34
Total reserves and surplus of municipal electric utilities	90,666,091.68
Total Commission and municipal reserves	$216,405,116.02

Financial Operating Results for 1939

The financial results of the Commission's operations continued to be affected during the first half of the fiscal year ended October 31, 1939, by the industrial recession of 1938. In its effect on revenue, this recession was more severely felt during the early months of 1939 than during 1938. The revenue from sales of primary power to companies served by the Niagara system was about 10 per cent less during the first nine months of the 1938-1939 fiscal year as compared with the corresponding period 1937-1938. The recession also retarded materially the normal increase of power requirements by municipal utilities in these months.

Loss of revenue from primary power sales during this period was, however, largely offset by increased sales of secondary power and by moderate adjustments in interim rates to a few municipalities. In the closing months of the year a sharp upturn of demands also occurred. The net result of these factors was an increase of about $2,000,000 in revenue of the Niagara and other co-operative systems of the Commission,—an amount sufficient to meet the cost of scheduled increases in purchased power, the costs of general extensions of service throughout the systems, and also the special costs occasioned by the war-time civil security necessities.

Despite the difficult circumstances encountered, the Commission was able to set aside for its various reserves an aggregate amount nearly equal in total to that made in respect of 1938.

The revenues and expenditures of the Northern Ontario Properties increased considerably during the fiscal year. As compared with the previous year, revenues, at $4,181,200.93, are up 23 per cent, while expenditures, at $2,143,035.95, increased about 10 per cent. Reserves for renewals and sinking fund were $1,457,223.62, compared with $1,269,460.36, and the balance available for contingencies, etc., totals $580,941.36, as compared with $184,519.85 in 1938.

Revenue of Commission

The revenue of the Commission at interim rates from the municipal utilities operating under cost contracts, from customers in rural power districts and from other customers with whom—on behalf of the municipalities—the Commission has special contracts, all within the Niagara, Georgian Bay, Eastern Ontario and Thunder Bay systems, Manitoulin Island, Nipissing rural power districts and Sudbury rural power district aggregated $32,639,427.41. The revenue of the Commission from customers served by the Northern Ontario Properties, which are held and operated in trust for the Province, was $4,181,200.93, making a total of $36,820,628.34.

Summarized operating results of these systems and rural power districts and of the Northern Ontario Properties, follow:

SUMMARIZED OPERATING RESULTS
OF THE
NIAGARA, GEORGIAN BAY, EASTERN ONTARIO. THUNDER BAY SYSTEMS
AND ALSO
MANITOULIN, NIPISSING AND SUDBURY RURAL POWER DISTRICTS

Revenue; amount received from or billed against municipalities and other customers		$28,503,339.25	
Revenue from customers in rural power districts		4,136,088.16	
Total revenue, systems and rural			$32,639,427.41
Operation, maintenance, administration, interest and other current expenses		$26,713,270.63	
Provision for reserves—			
Renewals	$ 2,206,611.82		
Contingencies and obsolescence	189,885.64		
Stabilization of rates	317,661.54		
Sinking fund	2,945,855.99		
		5,660,014.99	
			$32,373,285.62
Balance			$ 266,141.79

SUMMARIZED OPERATING RESULTS
OF THE
NORTHERN ONTARIO PROPERTIES

Held and operated by The Hydro-Electric Power Commission of Ontario
In trust for the Province of Ontario

Revenue; amount received from or billed against municipalities and other customers			$ 4,181,200.93
Operation, maintenance, administration, interest and other current expenses		$2,143,035.95	
Provision for reserves—			
Renewals	$ 309,809.61		
Contingencies and obsolescence	201,638.41		
Sinking fund	1,147,414.01		
		1,658,862.03	
			3,801,897.98
Balance			$ 379,302.95

COMPARATIVE FINANCIAL STATEMENTS

NIAGARA SYSTEM

	1938	1939
	$ c.	$ c.
Operating Expenses and Fixed Charges		
Power purchased	5,786,911.41	6,800,716.23
Operation, maintenance and administration	4,439,228.79	4,817,701.81
Interest	9,512,385.19	9,628,364.05
Provision for renewals	1,558,882.56	1,615,797.66
Provision for contingencies and obsolescence	604,442.27	200.59*
Provision for stabilization of rates	....	....
Sinking Fund	2,201,335.71	2,294,568.45
TOTAL COST OF POWER	24,103,185.93	25,157,348.79
REVENUE from municipalities at interim rates, from rural consumers and from private customers under flat rate contracts	23,931,458.03	25,448,869.78
Net balance credited or (charged) to municipalities under cost contracts	(171,727.90)	291,520.99

*On certain rural lines only,—operated by two municipalities.

EASTERN ONTARIO SYSTEM

	1938	1939
	$ c.	$ c.
Operating Expenses and Fixed Charges		
Power Purchased	905,233.97	1,024,071.40
Operation, maintenance and administration	938,595.30	964,191.18
Interest	979,566.89	1,039,632.24
Provision for renewals	261,820.01	271,339.98
Provision for contingencies and obsolescence	66,627.95	67,268.15
Provision for stabilization of rates	81,494.60	177,396.00
Sinking Fund	230,069.37	240,371.26
TOTAL COST OF POWER	3,463,408.09	3,784,270.21
REVENUE from municipalities at interim rates, from rural consumers and from private customers under flat rate contracts	3,564,306.86	3,787,621.56
Net balance credited to municipalities under cost contracts	100,898.77	3,351.35

War Efforts

No review of the past year's operations would be complete without reference to the steps taken to ensure that Hydro power will be available in ample quantities to enable Ontario to make its maximum contribution to the war efforts of Canada.

There are three main fields in which additional Hydro power can be used to expedite war-time production of needed supplies; first—in the mining fields of northern Ontario; second—in the manufacturing industries of southern Ontario; third—in the electro-chemical and electro-metallurgical industries.

RESPECTING THE SYSTEMS OF THE COMMISSION

GEORGIAN BAY SYSTEM

	1938	1939
	$ c.	$ c.
OPERATING EXPENSES AND FIXED CHARGES		
Power purchased	53,649.21	27,411.10
Operation, maintenance and administration	471,050.65	541,802.75
Interest	404,626.36	530,655.94
Provision for renewals	133,878.03	154,626.12
Provision for contingencies and obsolescence	29,247.78	35,903.73
Provision for stabilization or rates	86,648.10	94,107.00
Sinking Fund	99,052.44	118,135.78
TOTAL COST OF POWER	1,278,152.57	1,502,642.42
REVENUE from municipalities at interim rates, from rural consumers and from private customers under flat rate contracts	1,333,384.79	1,461,012.60
Net balance credited or (charged) to municipalities under cost contracts	55,232.22	(41,629.82)

THUNDER BAY SYSTEM

	1938	1939
	$ c.	$ c.
OPERATING EXPENSES AND FIXED CHARGES		
Operation, maintenance and administration	355,919.97	367,293.70
Interest	895,768.34	922,326.81
Provision for renewals	159,990.02	161,597.19
Provision for contingencies and obsolescence	85,852.37	86,513.17
Provision for stabilization of rates	....	46,158.54
Sinking Fund	283,441.03	291,029.60
TOTAL COST OF POWER	1,780,971.73	1,874,919.01
REVENUE from municipalities at interim rates, from rural consumers and from private customers under flat rate contracts	1,764,873.24	1,879,467.85
Net balance credited or (charged) to municipalities under cost contracts	(16,098.49)	4,548.84

War to-day is largely fought with machines made of metals and alloys. The production of nickel and copper, important war metals, has increased greatly in northern Ontario during recent years. Gold also may be considered a war metal of great importance and the spectacular growth in its production in Ontario, making a substantial contribution to the Dominion's financial strength, has been greatly fostered by low-cost Hydro electrical service. To-day, the reserves of hydro-electric power actually developed in northern Ontario are sufficient for normal growth for two years and many easily developed sites are available throughout the north.

The second field in which Hydro power may be needed in increasing amounts is in connection with the manufacturing industries of southern

Ontario. Here the contract provisions made for increased supplies of purchased power, aggregating 140,000 horsepower for the period 1940 to 1944, can, under the terms of the contracts, be advanced if necessary.

The third field in which Hydro power can be used to stimulate war production is in the electro-chemical and electro-metallurgical industries which supply many war-time needs. In this field the Commission can supply large amounts of at-will or secondary power without increasing its system capacity.

For the immediate future, therefore, there is ample power available in all districts to enable Ontario's war effort to be speeded up and maintained at a greatly enhanced level. During the past year many steps have been taken and plans made to ensure that this situation shall continue no matter what eventuates.

One important step taken was the passing by the Provincial Legislature of The Power Control Act. Under this Act The Hydro-Electric Power Commission of Ontario is given authority to regulate and control the generation, transformation, transmission, distribution, supply and use of all power in the Province. In brief, the object of this legislation is to give the Commission the necessary authority to regulate Ontario's power supplies so that they may make the maximum contribution to its war-time effort.

The Commission is also strengthening weak links in its extensive transmission systems by the construction of two or three strategic interconnecting and transmission lines of importance, both in eastern Ontario and in the western portion of the Niagara district. Careful consideration is also being given to industrial war demands, and continuous surveys are being made of industrial requirements in order to anticipate, if possible, any exceptional demands for war supplies of power, and to ensure that all plants at present working on munitions, or likely to be doing so in the near future, may be guaranteed an adequate and reliable power service whenever and wherever it may be required.

MUNICIPAL ELECTRIC UTILITIES

The following is a summation of the year's operation of the local electric utilities conducted by municipalities receiving power under cost contracts with the Commission:

Total revenue collected by the municipal electric utilities		$35,289,790.70
Cost of power	$21,855,595.20	
Operation, maintenance and administration	6,028,440.01	
Interest	1,594,040.32	
Sinking fund and principal payments on debentures	2,420,441.30	
Depreciation and other reserves	2,524,364.33	
Total		34,422,881.16
Surplus		866,909.54

With regard to the local Hydro utilities operating under cost contracts, the following statements summarize for each of the four co-operative systems administered by the Commission, the financial status and the year's operations as detailed in Section X of the Report:

NIAGARA SYSTEM

The total plant assets of the Niagara system utilities amount to $83,841,361.16. The total assets, including an equity in the H-E.P.C. of $42,131,257.65 aggregate $146,997,350.25. The reserves and surplus accumulated in connection with the local utilities, exclusive of the equity in the H-E.P.C., amount to $73,918,531.93, an increase of $4,576,674.81 during the year 1939. The percentage of net debt to total assets is 21.0 a reduction of 3.4 per cent.

The total revenue of the municipal electric utilities served by this system was $28,558,726.63, an increase of $990,889.85 as compared with the previous year. After meeting all expenses in respect of operation, including interest setting up the standard depreciation reserve amounting to $2,024,001.22 and providing $2,244,851.41 for the retirement of instalment and sinking fund debentures, the total net surplus for the year for the municipal electric utilities served by the Niagara system amounted to $661,463.52, as compared with $655,157.82 the previous year.

GEORGIAN BAY SYSTEM

The total plant assets of the Georgian Bay system utilities amount to $2,963,164.42. The total assets, including an equity in the H-E.P.C. of $1,556,477.57 aggregate $5,087,865.66. The reserves and surplus accumulated in connection with the local utilities, exclusive of the equity in H-E.P.C., amount to $3,131,173.05, an increase of $43,585.36 during the year 1939. The percentage of the net debt to total assets is 11.9, a reduction of 0.4 per cent.

The total revenue of the municipal electric utilities served by this system was $1,262,884.52, an increase of $22,794.81 as compared with the previous year. After meeting all expense in respect of operation, including interest, setting up the standard depreciation reserve amounting to $91,562.00 and providing $45,147.28 for the retirement of instalment and sinking fund debentures, the total net loss for the year for the municipal electric utilities served by the Georgian Bay system amounted to $26,897.01 as compared with a surplus of $75,450.57 the previous year.

EASTERN ONTARIO SYSTEM

The total plant assets of the Eastern Ontario system utilities amount to $9,149,235.27. The total assets, including an equity in the H-E.P.C. of $2,216,217.14, aggregate $13,968,432.79. The reserves and surplus accumulated in connection with the local utilities, exclusive of the equity in H-E.P.C., amount to $9,601,338.05, an increase of $498,720.88 during the year 1939. The percentage of net debt to total assets is 11.6, a reduction of 0.7 per cent.

The total revenue of the municipal electric utilities served by this system was $3,756,724.57, an increase of $220,165.01 as compared with the previous year. After meeting all expenses in respect of operation, including interest, setting up the standard depreciation reserve amounting to $244,696.81 and providing $109,910.04 for the retirement of instalment and sinking fund debentures, the total net surplus for the year for the municipal electric utilities served by the Eastern Ontario system amounted to $162,451.40 as compared with $243,365.46 the previous year.

THUNDER BAY SYSTEM

The total plant assets of the Thunder Bay system utilities amount to $2,765,875.55. The total assets, including an equity in the H-E.P.C. of $2,711,344.58, aggregate $6,518,524.21. The reserves and surplus accumulated in connection with the local utilities, exclusive of the equity in H-E.P.C., amount to $3,285,462.74 a decrease of $64,771.10 during the year 1939. The percentage of net debt to total assets is 9.8 an increase of 0.3 per cent.

The total revenue of the municipal electric utilities served by this system was $1,239,241.83, an increase of $60,066.24 as compared with the previous year. After meeting all expenses in respect of operation, including interest, setting up the standard depreciation reserve amounting to $46,174.94 and providing $10,450.26 for the retirement of instalment and sinking fund debentures, the total net loss for the year for the municipal electric utilities served by the Thunder Bay system amounted to $11,352.00, as compared with a net loss of $16,900.17 for the previous year.

* * *

The relationship between the Commission and the partner municipalities has been marked by increasing friendliness and co-operation during the year. Opportunities have been afforded for direct contact with many of those responsible for the supervision and operation of the local Hydro utilities, and these personal meetings have been marked by most cordial and helpful discussion.

My colleagues, the Hon. William L. Houck and Mr. J. Albert Smith join with me in thanks to the Commission's staff for faithful and efficient service. We are also grateful for the continued support given by the Press of the Province.

Respectfully submitted,

T. H. HOGG,
Chairman

TORONTO, ONTARIO. MARCH 31ST, 1940.

T. H. HOGG, ESQ., B.A.SC., C.E., D.ENG.,
Chairman, The Hydro-Electric Power Commission of Ontario,
Toronto, Ontario.

Sir:

I have the honour to submit, herewith, the Thirty-second Annual Report of The Hydro-Electric Power Commission of Ontario for the fiscal year which ended October 31, 1939. This report covers the operations of the Commission with regard to the supply of power to, or on behalf of, the partner Municipalities of the several Co-operative Systems, as well as the administration of the Northern Ontario Properties, which are held and operated by the Commission in trust for the Province of Ontario.

I have the honour to be, Sir,

Your obedient servant,

OSBORNE MITCHELL,
Secretary.

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THIRTY-SECOND ANNUAL REPORT
OF
The Hydro-Electric Power Commission of Ontario

FOREWORD
and
Guide to the Report

THE Hydro-Electric Power Commission of Ontario administers a co-operative municipal-ownership enterprise, supplying power throughout the Province of Ontario. The Commission was created in 1906 by special act of the Legislature and followed investigations by advisory commissions appointed as a result of public agitation to prevent monopoly and to provide a more satisfactory supply of low-cost power in Southern Ontario. In 1907 The Power Commission Act (7-Edward VII Ch. 19) was passed amplifying and extending the Act of 1906 and this Act—modified by numerous amending acts which now form part of the Revised Statutes of Ontario, 1937, Chap. 62—constitutes the authority under which the Commission operates.

The Hydro-Electric Power Commission of Ontario consists of a Chairman and two Commissioners, all of whom are appointed by the Lieutenant-Governor-in-Council to hold office during pleasure. One of the Commissioners must be a member of the Executive Council and two may be members.

In 1909, work was commenced on a comprehensive transmission system and by the end of 1910 power was being supplied to several municipalities.

The Commission has now been supplying electrical energy for more than twenty-nine years and the Report contains diagrams depicting the growth of the enterprise. During this period the costs of electricity to the consumer have been substantially reduced and the finances of the enterprise have been established on a secure foundation.

At the end of 1939 the Commission was serving 856 municipalities in Ontario. This number included 26 cities, 103 towns, 300 villages and police villages and 427 townships. With the exception of 14 suburban sections of townships known as "voted areas", the townships and 117 of the smaller villages are served as parts of 184 rural power districts.

Financial Features of Co-operative Systems

The basic principle governing the financial operations of the undertaking is, that electrical service be given by the Commission to the municipalities and by the municipalities to the ultimate consumers at cost. Cost includes not only all operating and maintenance charges, interest on capital investment and reserves for renewals or depreciation, for obsolescence and contingencies, and for stabilization of rates, but also a reserve for sinking fund or capital payments on debentures.

The undertaking from its inception has been entirely self-supporting and no contributions have been made from general taxes except in connection with service in rural power districts. In this case, the Province, in pursuance of its long established policy of assisting agriculture and with the approval of the urban citizens, assists extension of rural electrical service by a grant-in-aid of the capital cost and in other ways as specified and detailed in the Report.

As the principle of "service at cost" is radically different from that obtaining in private organizations, where profit is the governing feature, it naturally results in different and in some ways unique administrative features.

The undertaking as a whole involves two distinct phases of operations as follows:

The *First* phase of operations is the provision of the electrical power—either by generation or purchase—and its transformation, transmission and delivery in *wholesale* quantities to individual municipal utilities, to large industrial consumers, and to rural power districts. This phase of the operations is performed by The Hydro-Electric Power Commission of Ontario as trustee for the municipalities acting collectively in groups or "systems," and the financial statements relating to these collective activities of the municipalities are presented in Section IX of the Report. Each system of municipalities, as provided in *The Power Commission Act*, forms an independent financial unit and the accounts are therefore segregated and separately presented for each system. In order, however, that there may be a comprehensive presentation of the co-operative activities of the undertaking as a whole, there are presented, in addition, for the four main systems and miscellaneous co-operative activities, a balance sheet of assets and liabilities, a statement of cost distributions, a tabulation of fixed assets, and summary combined statements respecting the various reserves.

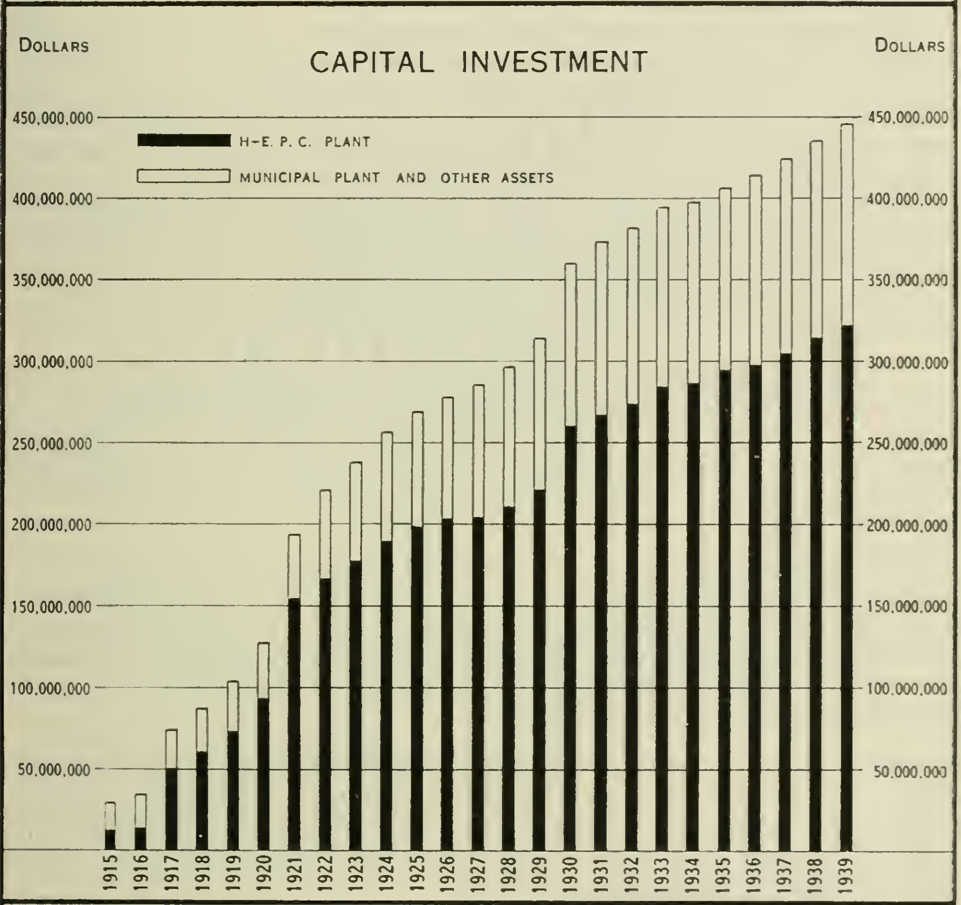
The *Second* phase of operations is the *retail* distribution of electrical energy to consumers within the limits of the areas served by the various municipal utilities and rural power districts. In the case of rural power districts which usually embrace portions of more than one township, The Hydro-Electric Power Commission not only provides the power at wholesale, but also —on behalf of the respective individual townships—attends to all physical and financial operations connected with the distribution of energy at retail to the consumers within the rural power districts. Summary financial statements relating to the rural power districts are also presented in Section IX of the Report, and a general report on their operation is given in Section III.

In the case of cities, towns, many villages and certain thickly populated areas of townships, retail distribution of electrical energy provided by the Commission is in general conducted by individual local municipal utility commissions under the general supervision of The Hydro-Electric Power Commission of Ontario. The balance sheets, operating reports and statistical data relating to the individual urban electrical utilities are presented in Section X of the Report.

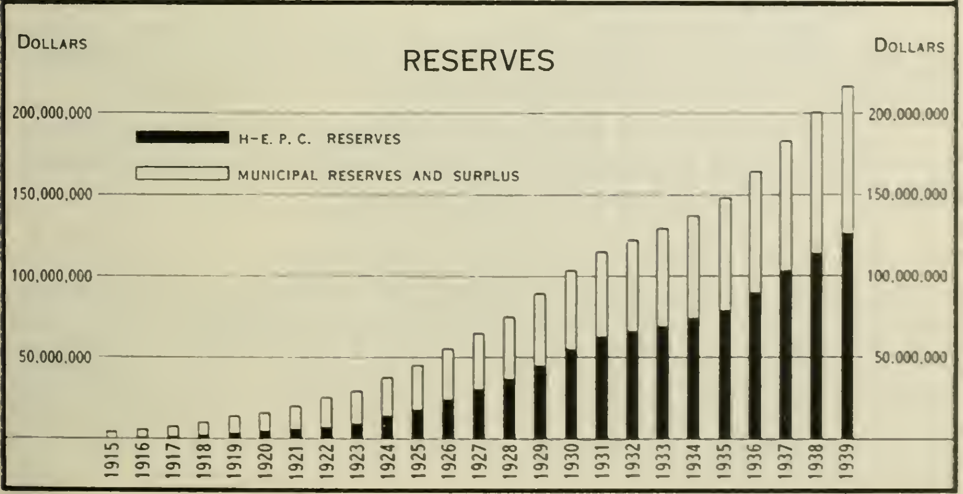
For the Northern Ontario Properties held and operated by the Commission in trust for the Province there are also presented in Section IX financial statements including a balance sheet, an operating account, and statements respecting reserves and capital expenditures.

THE HYDRO-ELECTRIC POWER COMMISSION OF ONTARIO

TWENTY-FIVE YEARS RECORD — ALL SYSTEMS



CAPITAL INVESTMENT



RESERVES

Further details respecting administration, and explanations of the financial tables presented in the Report are given in the introductions to sections IX and X on pages 103 and 189.

Co-operative Systems Operating

From time to time in accordance with provisions in *The Power Commission Act* various groups of municipalities have been co-ordinated to form systems for the purpose of obtaining power supplies from convenient sources. In some cases these small systems grew until their transmission lines interlocked with those of adjacent systems and it proved beneficial to consolidate the transmission networks and the financial and administrative features. In the well settled parts of the Province, known as Old Ontario, this process has now reached a more stable condition and the municipalities of the southern part of the Province are now combined in three systems: the Niagara system, the Georgian Bay system and the Eastern Ontario system. One other system of partnership municipalities is known as the Thunder Bay system.

The Niagara System is the largest and most important system. It embraces municipalities in all the territory between Niagara Falls, Hamilton and Toronto on the east and Windsor, Sarnia and Goderich on the west. It is served with electrical energy generated at plants on the Niagara river, supplemented with power transmitted from generating plants on the Ottawa river and with power purchased from Quebec companies.

The Georgian Bay System comprises municipalities in that part of the Province which surrounds the southern end of Georgian Bay and lies to the north of the territory served by the Niagara system. It includes the districts surrounding lake Simcoe and extends as far north as Huntsville in the Lake of Bays district and south to Port Perry. Its power supplies are derived chiefly from local water power developments.

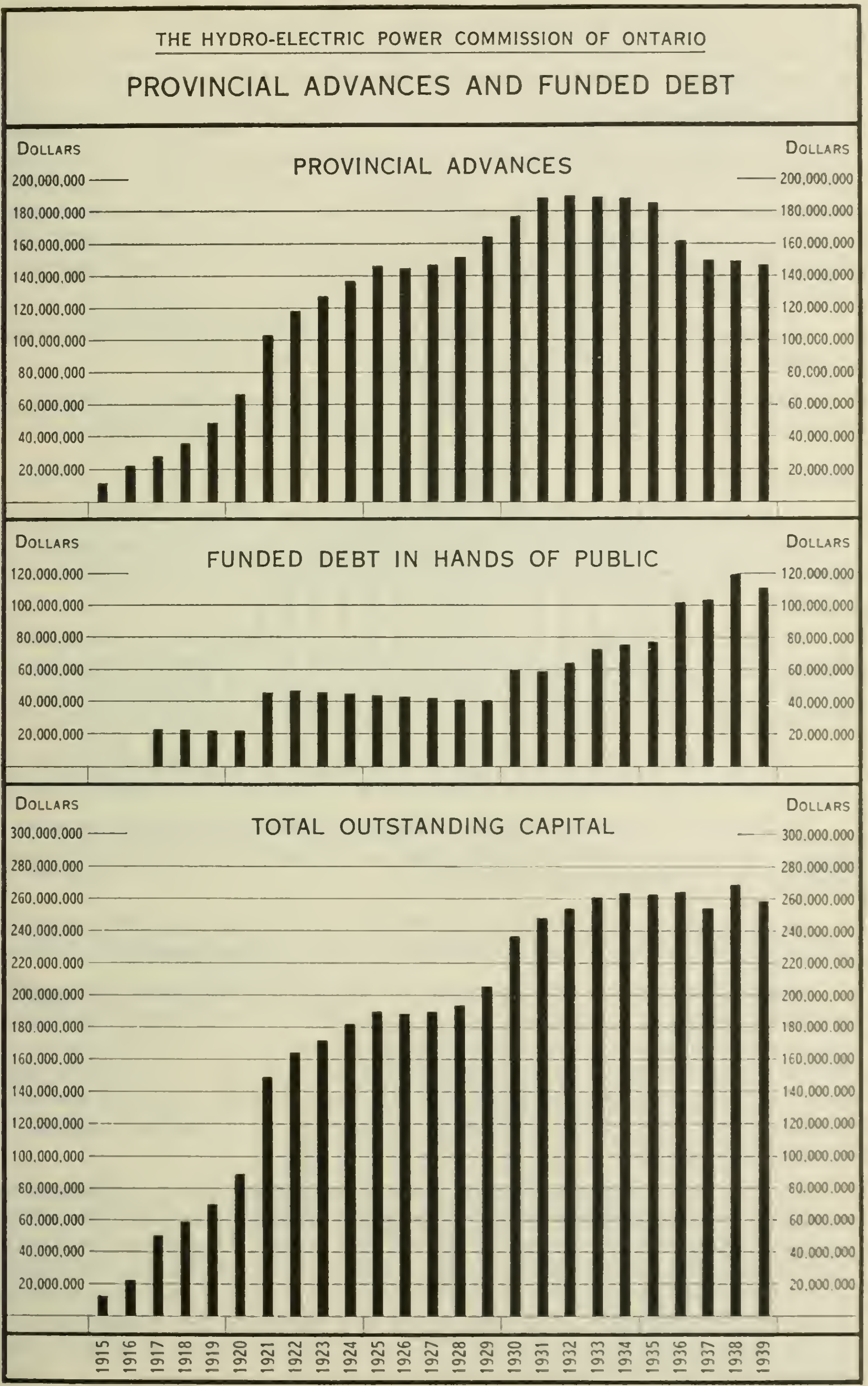
The Eastern Ontario System serves all of Ontario east of the areas comprising the Georgian Bay and the Niagara systems. It includes the districts of Central Ontario, St. Lawrence, Rideau, Ottawa and Madawaska; formerly separate systems. Its power supplies are from local developments supplemented by purchases from other sources.

The Thunder Bay System comprises the cities of Port Arthur and Fort William, adjacent rural sections, the village of Nipigon, and the mining district of Longlac. Two developments on the Nipigon river supply power.

A small rural district known as *Manitoulin Rural Power District* on Manitoulin island in the northern area of lake Huron is served by the Commission as an independent unit.

Northern Ontario Properties

In addition to its operations on behalf of the partner municipalities, the Commission, under an agreement with the Province, holds and operates the Northern Ontario Properties in trust for the Province. For the purposes of financial administration these properties are treated as one unit. The Northern Ontario Properties lie in the portion of the Province north of Lake Nipissing and French River areas, exclusive of the territory served by the Thunder Bay system. The principal areas in this vast territory at present


THE HYDRO-ELECTRIC POWER COMMISSION OF ONTARIO
PROVINCIAL ADVANCES AND FUNDED DEBT
DOLLARS
PROVINCIAL ADVANCES
200,000,000
180,000,000
160,000,000
140,000,000
120,000,000
100,000,000
80,000,000
60,000,000
40,000,000
20,000,000
FUNDED DEBT IN HANDS OF PUBLIC
120,000,000
100,000,000
80,000,000
60,000,000
40,000,000
20,000,000
TOTAL OUTSTANDING CAPITAL
300,000,000
280,000,000
260,000,000
240,000,000
220,000,000
200,000,000
180,000,000
160,000,000
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receiving service are the *Nipissing District* centering around the city of North Bay on the shore of lake Nipissing; the *Sudbury District* comprising the city of Sudbury and the adjacent mining area known as Sudbury Basin; the *Abitibi District* comprising the territory served by 25-cycle power from the Abitibi Canyon development, together with a small area in the southern portion of the district of Sudbury in which mining properties are served with 60-cycle power; the *Patricia-St. Joseph District* comprising the territory within transmission distance of the Ear Falls development at the outlet of Lac Seul on the English river including the Red Lake mining area, and the territory immediately north of lake St. Joseph in the territorial district of Patricia served with power from a development at Rat Rapids on the Albany river.

The geographic boundaries of the various systems are shown on the map of transmission lines and stations at the back of the Report.

The power supplies for the systems and Northern Ontario districts are listed in the first table of Section II of the Report on pages 6 and 7.

The Annual Report

The table of contents, pages xxi and xxii lists the matters dealt with in the Report. At the end of the Report there is a comprehensive index. To those not conversant with the Commission's Reports, the following notes will be useful.

In Section II, pages 5 to 33, dealing with the operations of the systems, are a number of diagrams showing graphically the monthly loads on the several systems and districts. Tables are also presented showing the amounts of power taken by the various municipalities during the past two years.

The rural distribution work of the Commission has proved of widespread interest and special reference to this is made in Section III on pages 41 to 58.

In Sections V and VI will be found information respecting progress of work on new power developments and on transmission system extensions, together with photographic illustrations.

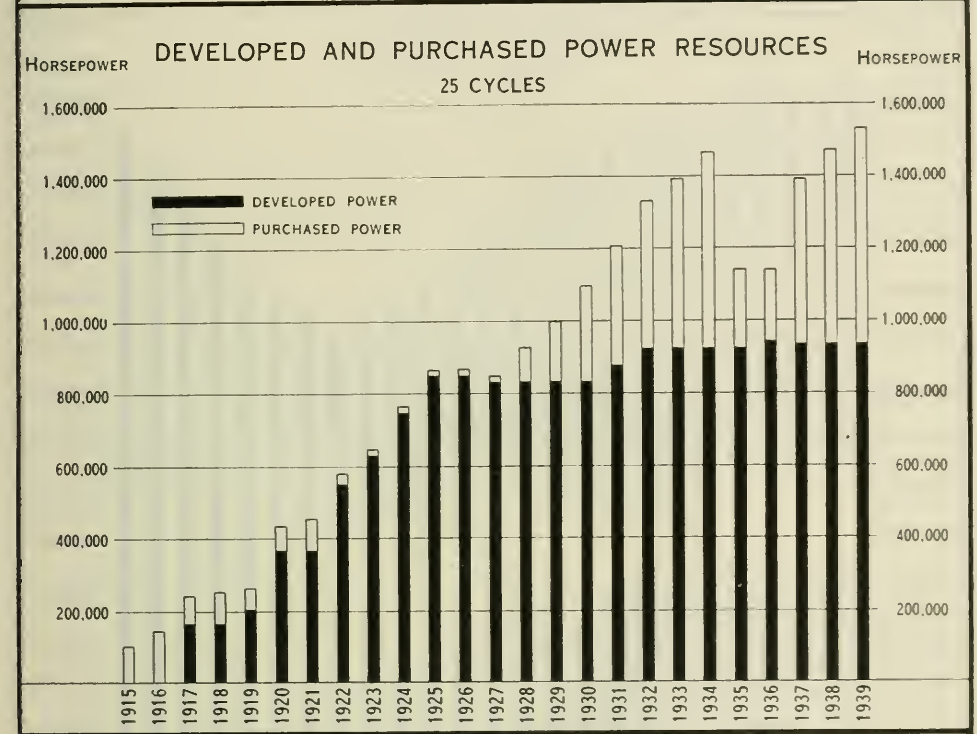
About one-half of the Report is devoted to financial and other statistical data which are presented in two sections IX and X already referred to above.

Frequent enquiries for the rates for service to consumers are received by the Commission. For the urban municipalities served by the Commission these are given in statement "E" starting on page 346. For the rural power districts they are given in a table starting on page 52. Certain statistical data resulting from the application of the rates in urban utilities are given in statement "D". This statement is prefaced by a special introduction starting on page 328.

In its Annual Reports the Commission aims to present a comprehensive statement respecting the activities of the whole undertaking under its administration. Explanatory statements are suitably placed throughout the Report. The Commission receives many letters asking for general information respecting its activities, as well as requests for specific information concerning certain phases of its operations. In most cases the enquiries can satisfactorily be answered by simply directing attention to information presented in the Annual Report.

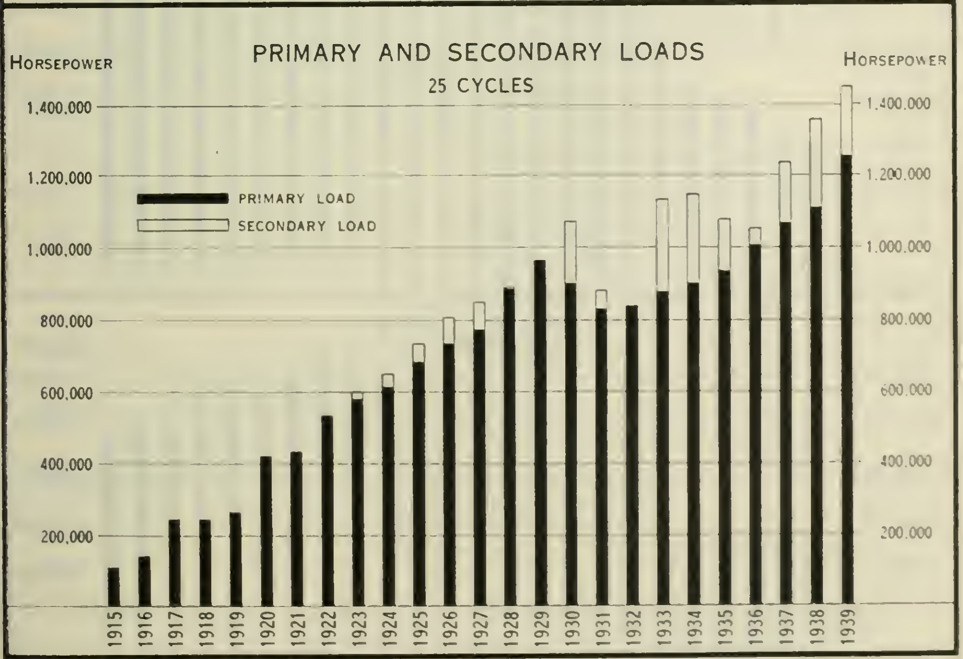
THE HYDRO-ELECTRIC POWER COMMISSION OF ONTARIO

TWENTY-FIVE YEARS RECORD—NIAGARA SYSTEM



DEVELOPED AND PURCHASED POWER RESOURCES

25 CYCLES



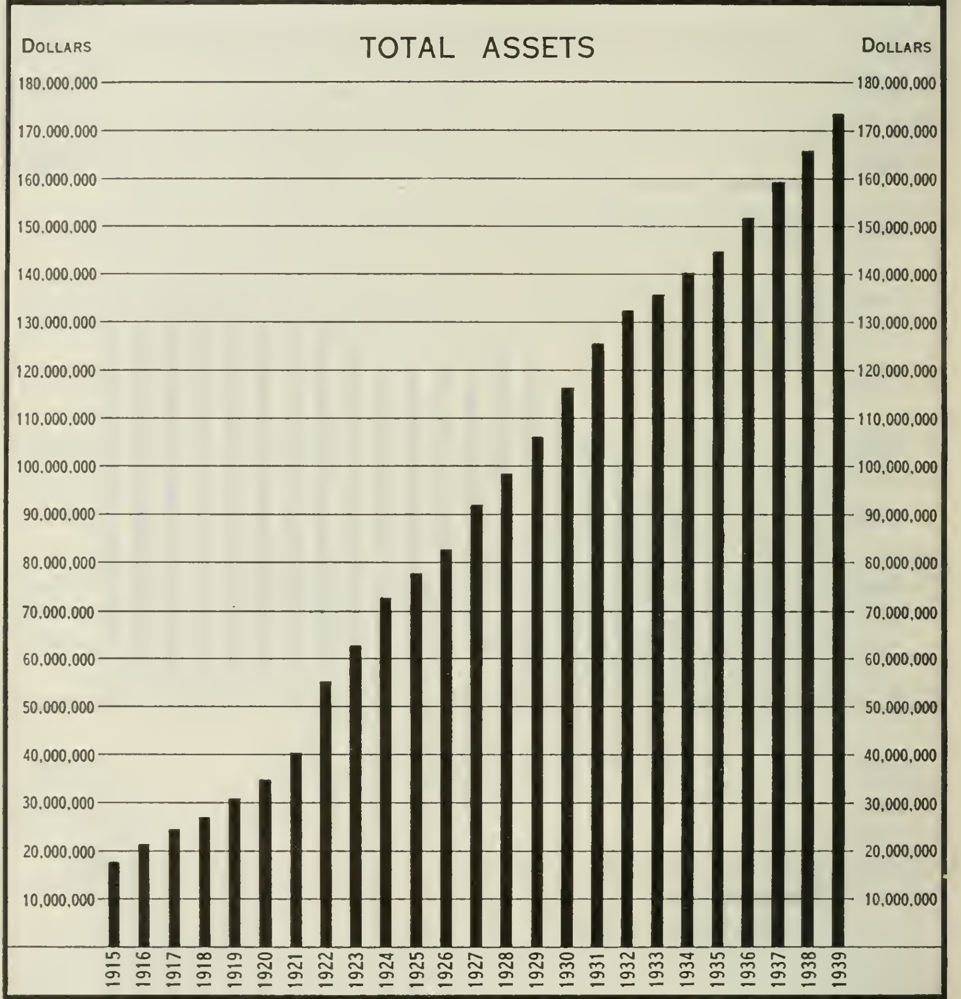
PRIMARY AND SECONDARY LOADS

25 CYCLES

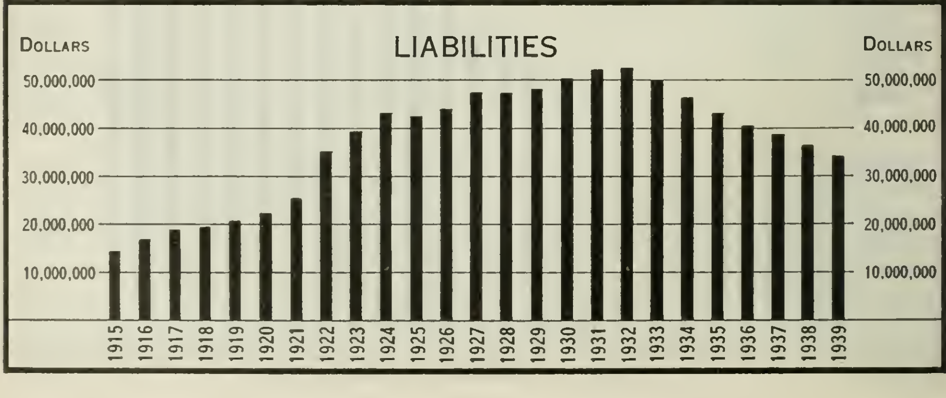
THE HYDRO-ELECTRIC POWER COMMISSION OF ONTARIO

HYDRO UTILITIES OF CO-OPERATING URBAN MUNICIPALITIES

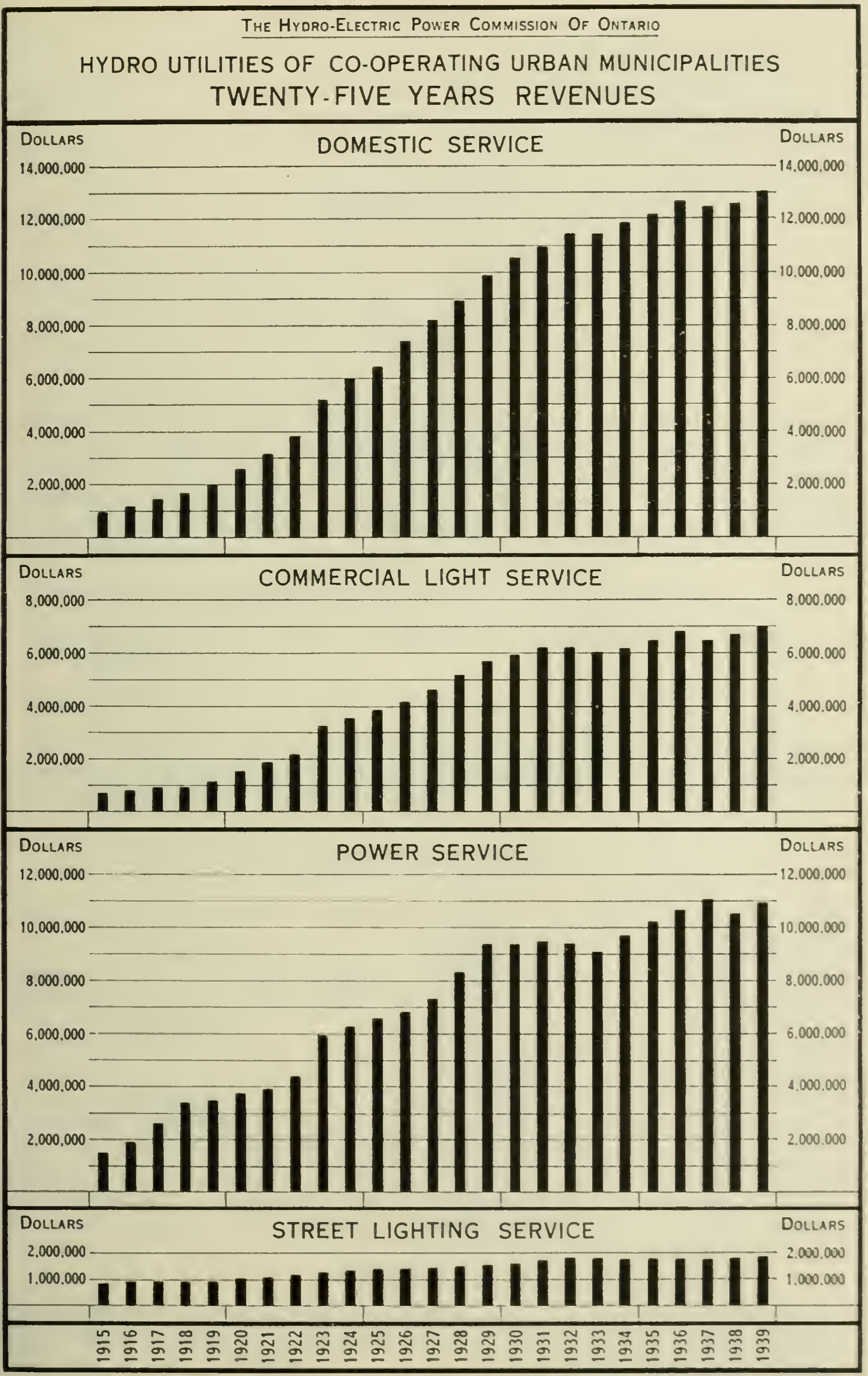
TWENTY-FIVE YEARS RECORD



TOTAL ASSETS



LIABILITIES



THE HYDRO-ELECTRIC POWER COMMISSION OF ONTARIO

HYDRO UTILITIES OF CO-OPERATING URBAN MUNICIPALITIES
TWENTY-FIVE YEARS REVENUES

SECTION I

LEGAL

At the 1939 Session of the Legislative Assembly of the Province of Ontario two Acts respecting The Hydro-Electric Power Commission of Ontario were passed. At the Second Session in 1939 an Act respecting the regulation and control of the use of power in Ontario was passed. The said Acts are reproduced in full in Appendix I of this Report. The short titles of the said Acts are as follows:

The Power Commission Amendment Act, 1939, Chapter 35

The Rural Hydro-Electric Distribution Amendment Act, 1939, Chapter 41

The Power Control Act, 1939, Second Session, Chapter 8.

The agreements between The Hydro-Electric Power Commission of Ontario and municipalities and corporations mentioned in the list hereunder given were approved by Orders-in-Council.

CO-OPERATIVE SYSTEMS

Town

Arnprior	Dec. 9, 1938

Villages

Lion's Head	Aug. 11, 1939
Millbrook	Aug. 2, 1939

Police Village

Orono	Dec. 7, 1938

Townships

Anglesea, Kaladar and Effingham	July 13, 1939
Armour	Sept. 7, 1939
Assiginack	Jan. 9, 1939
Bagot and Blythfield	April 11, 1939
Barrie	Aug. 19, 1939
Conmee	April 27, 1939
Dalton	May 29, 1939
Eastnor	Aug. 5, 1939
Elizabethtown	Aug. 10, 1939
Fenelon	Feb. 14, 1938
Flos	June 10, 1939
Gillies	May 6, 1939
Marysburgh North	Mar. 15, 1939
Normanby	Sept. 18, 1939
North Algona	Aug. 1, 1939
North Gower	Jan. 2, 1939
O'Connor	May 8, 1939
Sherbrooke South	Jan. 9, 1939
Stisted	Nov. 25, 1938
Vaughan	Jan. 9, 1939
Wilberforce	Aug. 5, 1939
Wolfe Island	Nov. 5, 1938

Corporations

Aluminum Company of Canada, Limited (Firm Power)	Sept. 18, 1939
Aluminum Company of Canada, Limited (Interruptible Power)	Sept. 18, 1939
The Beaver Wood Fibre Company Limited.	May 2, 1939
Canadian Associated Aircraft, Limited	Sept. 12, 1939

CORPORATIONS—Continued

Canadian Broadcasting Corporation	April 1, 1939
The Goodyear Tire & Rubber Company of Canada, Limited	Aug. 15, 1939
The Great Lakes Paper Company, Limited	June 1, 1939
Howard Smith Paper Mills, Limited (Surplus Power)	June 30, 1939
Howard Smith Paper Mills, Limited (5,400 h.p. Firm Power)	June 30, 1939
Howard Smith Paper Mills, Limited (4,150 h.p. Firm Power)	June 30, 1939
The Ontario Paper Company Limited (Firm Power)	Feb. 9, 1939
The Ontario Paper Company Limited (Steam Process Power)	Feb. 9, 1939
Provincial Paper Limited	Aug. 2, 1939
White Valley Chemicals, Limited	June 16, 1939

NORTHERN ONTARIO PROPERTIES

TOWNS

Sioux Lookout	Feb. 8, 1939
Trout Creek	Aug. 10, 1939

TOWNSHIPS

Chisholm	Oct. 5, 1939

TOWNSHIPS

Fauquier	Oct. 16, 1939
McKim	Aug. 21, 1939
Neelon and Garson	Aug. 16, 1939
Nipissing	Oct. 26, 1939
Shackleton and Machin	Oct. 10, 1939

RIGHT-OF-WAY AND PROPERTY

The Year's Operations

The continued rapid expansion of the Commission's operations resulted in a large demand for new right-of-way, most of which was acquired by easement. Close to the larger urban centres, however, the fee of the land occupied was usually acquired. The number of settlements made increased by approximately 20 per cent.

Power Development Lands

A number of claims by owners of property abutting Chats lake were settled.

The remaining outstanding claims on Frederick House lake were disposed of.

Transmission and Distribution Lines

The large increase in rights required for rural distribution lines involved the securing of 4,304 easements, 430 crossing agreements with other corporations, 472 tree trimming agreements, and settlement of 121 damage claims.

Transmission lines of importance in connection with which various rights were acquired are as follows:

Niagara System—Vanessa junction to Norfolk transformer station, Sun Brick junction to East York distribution station, Wellesley junction to Wellesley distribution station, and Virgil junction to Virgil distribution station.

Eastern Ontario System—Sidney transformer station to Brighton distribution station.

Northern Ontario Properties—Preliminary application has been made to the Province of Ontario for a License of Occupation for transmission line from Ear Falls to Sioux Lookout, and from Ear Falls via Uchi Gold Mines to Crow Lake.

Application has been made for a License of Occupation for a transmission line from a point on the Hunta-Sudbury line in Garibaldi Township to Ronda Gold Mines in MacMurchy Township, and Sylvanite Gold Mines in Tyrell Township.

Rights were completed for line between Crystal Falls and Coniston.

Further rights were acquired between Cameron Falls and Port Arthur.

Station Sites

Distribution station sites were purchased for an extension to Priceville and Belleville and for new stations at Brampton, Treadwell, Wellesley, Beaumaris, Fonthill, Clinton, Virgil, Fallingbrook, Hudson, Campbellville, Glencairn, Kingsway, and Roslyn. Patrolmen's cottage sites were secured at McKirdy, Vittoria, Pelham and Sioux Lookout.

In the many negotiations conducted only eight owners appealed to the Valuator, appointed under the Power Commission Act.

Service and Office Buildings

A block of property was acquired at the rear of the Head Office to provide additional facilities.

A number of leases were entered into throughout the Province to provide office space and storage facilities for the ever-increasing number of rural district and inspection offices.

Sales and Leases

As in previous years, the policy of disposing of excess lands was continued, and a large number of properties were sold. The sale of several rights-of-way, the fee of which was not considered essential, was continued, transmission line rights being retained thereon.

Lands owned by the Commission in connection with power developments, and also lands comprising several hundreds of miles of right-of-way not wholly occupied by the Commission's equipment, were leased wherever possible to adjoining property owners with the dual object of obtaining increased revenue and decreasing maintenance costs. Practically all of the residences owned by the Commission were occupied under lease. The number of income bearing leases approximates 1,500 and the annual revenue is about $90,000.

Residences and other buildings in urban and rural districts, chiefly in the Toronto and Niagara areas, were maintained in good condition and in many cases were rehabilitated and improved in order to meet modern requirements and produce increased revenue.

Surveys

A large number of surveys of lands owned, and of properties being acquired, were made. Surveys covering a large number of canal and river crossings were completed for Government approval.

In practically all cases where surveys of lands held in fee were made, standard H-E.P.C. monuments were placed to mark the boundaries; some 350 monuments were so placed.

Surveys of right-of-way from Oshawa to Bowmanville, Newmarket to Jersey Side Road were made and monuments placed to define limits of property over which the Commission retained transmission line rights after sale of property.

The more important field surveys made were in connection with the following properties:

Generating Stations and Sites: Walkerton, Appleton and Pakenham.

Transformer and Distribution Stations: Pelham, Burlington, Beaumaris, Virgil, Fonthill, Cainsville, Huntsville, Clinton, Penetang, Vittoria, Roslyn, Birchcliff, East York, Fairbank, Sioux Lookout, Kingswood, Glencairn, Hudson, Long Lac, Dumfries, Norfolk and Waubaushene.

Patrolmen's Cottage Sites: LaForest, Shining Tree and Mattagami, Islington Jct. to Wiltshire Jct. (Union St. to C.P.R. and Silverthorne Avenue to Carrick Ave.) N.66x82.

Owing to the changed conditions obtaining, it has been found necessary to re-survey the original high-tension transmission system constructed in 1909, the easements for which expired in 1939. Survey work, which commenced late in the year, will require at least a year to complete.

Records

The following is a brief statistical summary of the records made:

(1) All current deeds including plans attached were copied in the Title Record Books, and Title record plans brought up to date.

(2) Plans were indexed for all purchases, sales, easements, leases, licenses of occupation, crossings and title records.

(a) Purchases and sales of land.
(b) Easements.
(c) Leases and licenses of occupation, crossings, etc.
(d) Title record plans.

(3) The following were indexed:

Deeds of land	124
Tree trimming rights	420
Transmission line easements	1454

Taxes

Assessments covering Commission owned properties were received from 251 municipalities. Where assessments were not in conformity with the provisions of The Power Commission Act, appeals were made, resulting generally in a reduction of assessment and taxes.

SECTION II

OPERATION OF THE SYSTEMS

OPERATING conditions on all systems were favourable throughout the year. No major failure of equipment occurred, and there were no serious interruptions to service on any part of the Commission's undertakings. Water conditions on the Ottawa, Trent, and Georgian Bay watersheds were approximately normal, taking an average over the year. However, it was necessary at times to draw heavily on storage reserves to maintain stream flow, particularly towards the close of the fiscal year.

Load conditions

The total output during the year, including power generated in the Commission's own generating stations and that purchased from outside sources, amounted to 8,501,894,632 kilowatt-hours. This was the largest output on record and exceeds that of the previous year by 12.1 per cent. The October peak load, including primary and secondary, amounted to 1,963,471 horsepower, which was higher than that of any previous year and exceeded the October peak of 1938 by 7.2 per cent.

The output for primary power purposes also exceeded all previous records for this class of power. Primary demands during the year called for an output on all systems of 6,575,944,747 kilowatt-hours, showing an increase of 7.4 per cent over the previous year. The primary peak load rose to 1,669,337 horsepower in October, which is the highest primary load ever carried and exceeded the October, 1938, primary peak by 185,000 horsepower or 12.4 per cent.

The primary load, which is distinguished from the total load in that it excludes secondary power supplied only as and when available, is of greater significance in relation to revenue and general industrial conditions than is the total load. Allowing for seasonal changes the demand for primary power rose steadily through the year. In the co-operative systems, municipal and rural demands contributed largely to this rise, further aided in September and October by increases in industrial demands, presumably arising from war preparedness. In the Northern Ontario Properties, the substantial growth of recent years continued, the total primary peak load rising from 145,000 horsepower in 1938 to 168,000 horsepower in 1939, an increase of 16.0 per cent.

TOTAL POWER GENERATED

HYDRO-ELECTRIC GENERATING PLANTS

Generating plants	Maximum normal plant capacity Oct. 31, 1939 horsepower	Peak load during fiscal year		Total output during fiscal year	
		1937-38 horse-power	1938-39 horse-power	1937-38 kilowatt-hours	1938-39 kilowatt-hours
Niagara system					
Queenston-Chippawa—Niagara river	500,000	497,319	494,638	2,326,916,000	2,273,928,000
"Ontario Power"—Niagara river	180,000	175,603	176,944	389,325,000	680,430,000
"Toronto Power"—Niagara river	150,000	148,794	136,059	405,610,000	280,146,000
Chats Falls (Ontario half)—Ottawa river	108,000	112,601	114,611	352,019,350	342,874,500
DeCew Falls—Welland canal	50,000	48,257	46,917	124,851,000	137,088,000
Steam Plant—Hamilton	24,000	1,609	8,311	22,000	21,600
Georgian Bay system					
South Falls—South Muskoka river	5,600	5,831	5,898	27,688,320	23,305,500
Hanna Chute—South Muskoka river	1,600	1,609	1,743	8,241,600	7,368,000
Trethewey Falls—South Muskoka river	2,300	2,145	2,145	11,128,800	9,487,200
Ragged Rapids—Musquash river	10,000	5,630	10,154	927,800	31,595,100
Bala No. 1 and 2—Muskoka river	600	603	597	3,136,760	2,953,920
Big Chute—Severn river	5,800	5,791	5,912	23,404,080	22,030,200
Wasdells Falls—Severn river	1,200	1,072	1,220	3,457,680	2,946,140
Eugenia Falls—Beaver river	7,800	7,547	7,668	15,086,000	14,091,600
Hanover—Saugeen river	400	409	416	511,296	205,920
Walkerton—Saugeen river	500	489	489	2,066,200	1,448,200
Eastern Ontario system					
Sidney—Dam No. 2, Trent river	4,500	5,228	5,261	22,146,600	20,626,200
Frankford—Dam No. 5—Trent river	3,500	3,861	3,861	18,593,700	15,493,600
Sills Island—Dam No. 6—Trent river	2,100	2,212	2,332	9,939,000	9,433,680
Meyersburg—Dam No. 8—Trent river	7,000	8,043	7,895	40,533,040	28,656,400
Hague's Reach—Dam No. 9—Trent river	4,500	5,295	4,799	24,152,800	20,454,630
Ranney Falls—Dam No. 10—Trent river	11,500	11,944	11,930	52,556,540	49,417,880
Seymour—Dam No. 11—Trent river	4,200	4,692	4,826	19,917,600	17,569,920
Heely Falls—Dam No. 14—Trent river	15,300	16,186	16,086	66,238,900	58,163,420
Auburn—Dam No. 18—Trent river	2,400	2,788	2,607	13,084,310	11,444,580
Douro—Lock No. 24—Otonabee river	900	1,072	938	1,043,400	161,850
Lakefield—Otonabee river	2,300	2,413	2,413	11,258,640	9,971,260
Young's Point—Otonabee river	500	603	0	118,650	0
Fenelon Falls-Dam No. 30-Sturgeon river	1,000	938	952	2,275,050	2,505,800
High Falls—Mississippi river	3,000	3,264	3,271	13,106,640	8,595,240
Carleton Place—Mississippi river	400	509	0	2,520	0
Calabogie—Madawaska river	6,000	5,932	6,354	19,620,070	18,608,390
Galetta—Mississippi river	1,100	1,253	1,206	2,491,800	2,260,200
Thunder Bay system					
Cameron Falls—Nipigon river	73,500	76,407	75,201	356,173,000	362,880,000
Alexander—Nipigon river	50,000	53,887	52,681	270,743,600	273,028,800
Northern Ontario Properties					
Nipissing district					
Nipissing—South river	2,100	2,239	2,259	7,619,160	7,329,560
Bingham Chute—South river	1,200	1,314	1,287	3,738,560	3,771,440
Elliot Chute—South river	1,700	1,917	1,897	2,891,400	2,781,400
Sudbury district					
Coniston—Wanapitei river	5,900	5,630	5,764	20,605,300	23,322,350
McVittie—Wanapitei river	3,100	3,150	3,217	16,082,250	17,374,700
Stinson—Wanapitei river	7,500	7,399	6,917	21,492,000	19,308,000
Crystal Falls—Sturgeon river	10,000	6,971	8,190	17,326,170	25,708,295
Abitibi district					
Abitibi Canyon—Abitibi river	240,000	172,252	188,740	696,148,500	901,415,000
Patricia-St. Joseph district					
Ear Falls—English river	9,000	5,965	9,122	27,910,900	38,190,600
Rat Rapids—Albany river	3,000	3,097	3,458	14,955,780	17,086,540
Total generated	1,525,000	*	*	5,467,157,766	5,795,479,615

*Because the peak loads on the various generating plants and purchased power sources usually occur at different times, the sum of the individual peak loads would not represent the sum of the peak loads on the systems. These, in the case of each system, must relate to the maximum load occurring at any one time. Consequently, the column headed "Peak load" is not totalled.

AND PURCHASED—ALL SYSTEMS

POWER PURCHASED

Power source	Contract amount horsepower Oct. 31, 1939	Total purchased	
		1937-38 Kilowatt-hours	1938-39 Kilowatt-hours
Canadian Niagara Power Co.	20,000	85,139,200	84,170,800
Gatineau Power Co.—25-cycle	200,000	701,642,880	914,970,500
Ottawa Valley Power Co.	108,000	352,019,350	342,874,500
Beauharnois Light, Heat and Power Co.	150,000	509,900,000	727,740,000
Maclaren-Quebec Power Co.	60,000	180,097,000	272,709,000
Gatineau Power Co.—60-cycle delivery at 110 kv.	60,000	195,820,270	274,342,600
Gatineau Power Co.—60-cycle delivery at 11 kv.	20,000	65,019,600	65,737,800
Gatineau Power Co.—60-cycle delivery to Treadwell	350	0	369,000
M.F. Beach Estate	500	1,567,200	1,698,400
Rideau Power Co.	400	2,563,600	1,840,400
Campbellford Water & Light Commission	800	3,699,700	3,722,900
Abitibi Power & Paper Co.	500	158,557	317,557
Manitoulin Pulp Co.*	300	444,100	620,700
Huronian Co.*	300	0	180,200
Pembroke Electric Light Co. Ltd.*	400	0	No record
Orillia Water, Light & Power Commission*	400	124,380	643,800
Gananoque Light, Heat & Power Co.*	160	No record	250,740
Kaministiquia Power Co.†	....	16,717,920	13,844,320
Fenelon Falls Light, Heat & Power Commission‡	....	1,050	5,600
Welland Ship Canal‡	....	0	376,200
Total purchased	622,110	2,114,914,807	2,706,415,017

Power purchased, contract amount, 1939	622,110	horsepower
Maximum normal plant capacity, 1939	1,525,000	"
Total available capacity generated and purchased, 1939	2,147,110	"
Total available capacity generated and purchased, 1938	2,059,405	"
Difference (increase)	87,705	"
Total energy purchased, 1939	2,706,415,017	kilowatt-hours
Total energy generated, 1939	5,795,479,615	" "
Total energy generated and purchased, 1939	8,501,894,632	" "
Total energy generated and purchased, 1938	7,582,072,573	" "
Difference (increase)	919,822,059	" "

*Purchased for delivery to remote rural power districts.

†Purchased on kilowatt-hour basis.

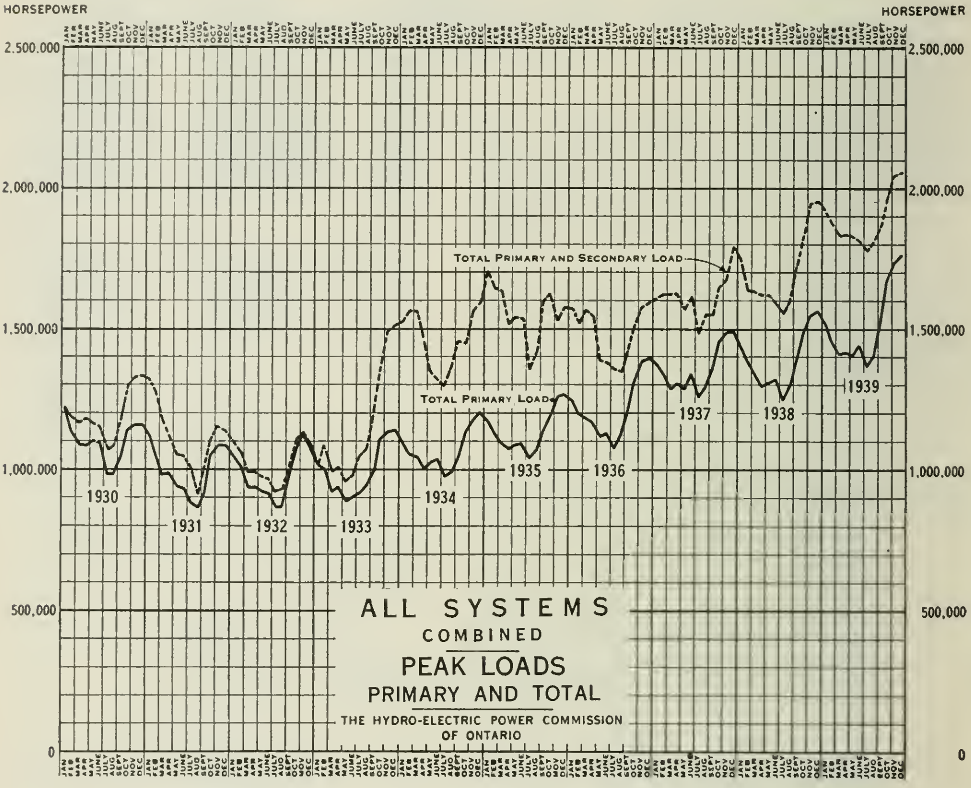
‡Emergency use.

CAUTION: The figures for "Maximum normal plant capacity" reflect the capacity of the various plants under the most favourable operating conditions which can reasonably be considered as normal, taking into consideration turbine capacity as well as generator capacity, and also the net operating head and available water supply.

Owing, among other things, to changes in generating equipment due to wear and tear or the replacement of parts, also to changes in limitations governing water levels and effective net heads, the maximum normal plant capacity is not a fixed quantity but is one which must be revised from time to time.

It is particularly important to bear in mind that the column headed "Maximum normal plant capacity" cannot be taken as an indication of the dependable capacity of the various plants: in some cases, it is, but in many cases it is not. Chief among the factors which govern the maximum dependable capacity of a hydraulic power plant and which are not reflected in column headed "Maximum normal plant capacity" are abnormal variations in water supply and operating limitations encountered when plants are so situated on a given stream as to be affected by one another.

Details regarding the load of each of the co-operative systems and of the several districts of the Northern Ontario Properties are given in the load graphs in this section of the Report.



FORESTRY DIVISION

The Forestry division continued its regular transmission and rural line-clearing operations to protect the Commission's lines, equipment and service from tree interference.

Reforestation was continued, but confined to replacement plantings on non-revenue producing lands in the Niagara system. Work was also carried out on generating and transformer station grounds for the preservation and maintenance of existing trees and shrubs.

Transmission and Rural Line-clearing Operations

The year's operations involved treatment of 97,000 trees and 824 pole spans of underbrush spread over 3,907 miles of power transmission and telephone line. Rural work was increased by reason of county and township roads taken over by the Department of Highways and the construction of new lines along the King's highways.

SYMMETRICAL PRUNING OF TREES BORDERING HIGHWAYS

New Construction Line-Clearing Operations

Operations were performed to obtain clearance for approximately 137 miles of new transmission and rural line. This work involved trimming of 3,400 trees, and removal of 680 diseased and dangerous trees.

Reforestation

Reforestation operations involved planting of approximately 3,100 coniferous and deciduous trees to replace losses at DeCew and Queenston generating stations and Toronto Power transformer station.

Municipal Hydro Systems

Line-clearing operations were performed for fifteen municipalities. This work involved treatment of 3,450 trees spread over approximately 59 miles of distribution line.

RADIO COMMUNICATION

The Commission short-wave radio stations at Toronto and in the generating stations at Cameron Falls, Ear Falls and Rat Rapids have continued to operate satisfactorily. Two additional stations were placed in service at Timmins and Frederick House Lake dam in the Abitibi district.

New transmitting equipment was purchased to improve service communication between Toronto and Ear Falls and Rat Rapids generating stations.

NIAGARA SYSTEM

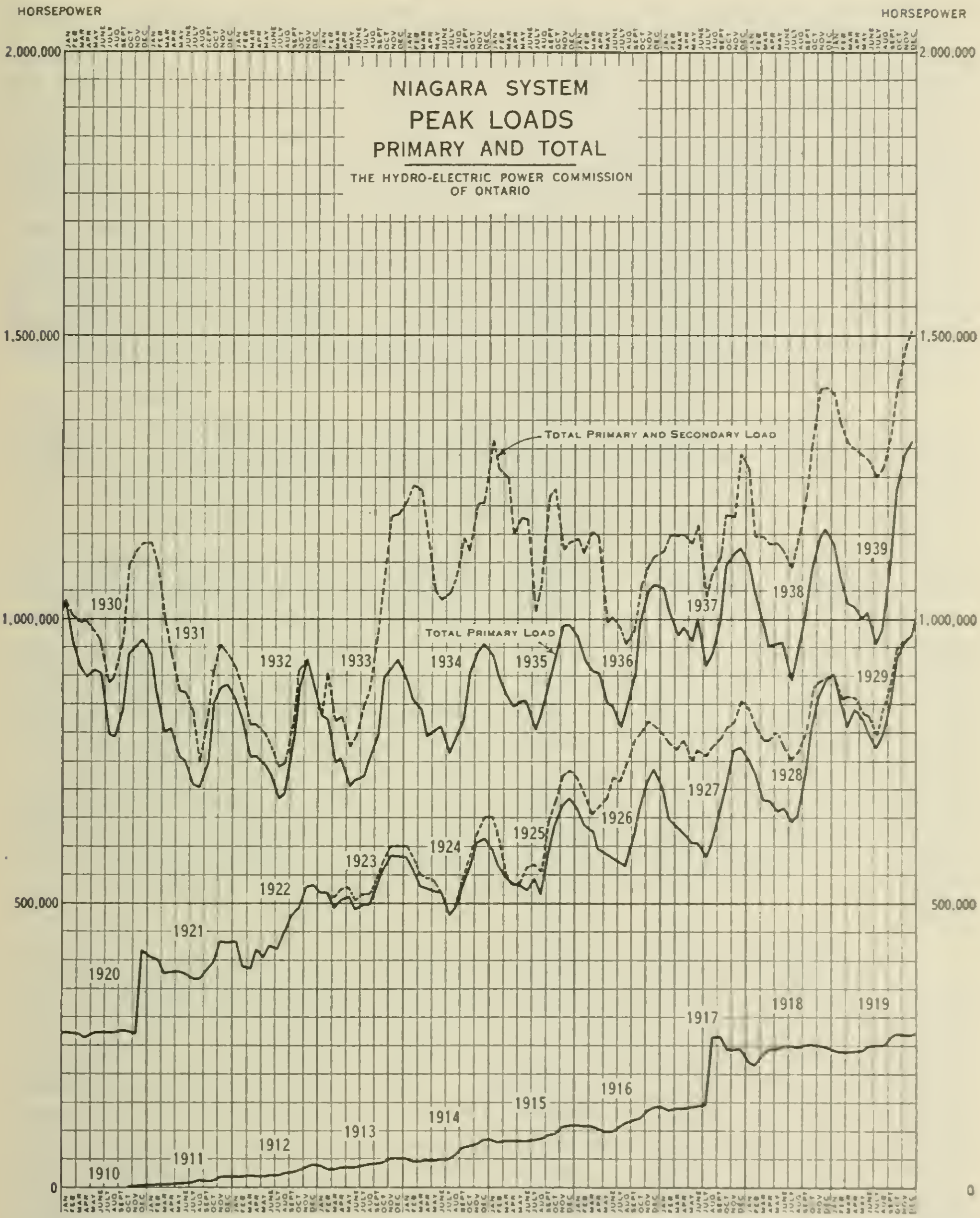
The total output on the Niagara system, which distributes a little more than 70 per cent of all the power distributed by the Commission, rose to new heights in 1939, exceeding the total output in the previous year by 11.6 per cent. Approximately 77 per cent of the total output was consumed in primary services. Compared with the previous year, the output for primary power purposes was 4.9 per cent greater. At the commencement of the year primary demands were on about the same level as in the like period a year earlier, but as the year advanced the 1939 level rose steadily above the level of 1938 until near the end when a sharply rising trend developed. At the close of the fiscal year primary demands were 13 per cent higher. In October, 1939, the system primary peak load was 1,228,552 horsepower, or 13.1 per cent greater than in October, 1938, and was in excess of the highest previous peak on record. Load growth continued through November and December.

During the major portion of the year, power resources available to the system were fully loaded. In addition to meeting all primary power requirements, the system produced approximately 1,400,000,000 kilowatt-hours for delivery to users of secondary power.

Transmission line operating conditions throughout the year were most favourable. Interruptions to service caused by lightning, sleet, and gales, the chief enemies of electric-power transmission, were relatively few, and little damage was done to lines or equipment. During the year there were two complete failures to service of all customers on the Dominion Power and Transmission division of the Niagara system. There was also one complete interruption on the 220,000-volt lines supplying power from eastern sources.

The Niagara river plants have been operated in conjunction with Quebec power sources to meet system load requirements in the most economical manner. In general, the full output of these plants, as governed by water limitations and seasonal power demands, has been available throughout the year. Little trouble was experienced from ice conditions in the Niagara river during the winter. On only one occasion, January 30, was there any appreciable loss in Niagara generating capacity from this cause.

The output of the two units at the Canadian Niagara Company's plant, reserved for the Commission's use, was available to the Niagara system throughout the year. Practically none of the usual trouble from ice at the Canadian Niagara Power Company's plant was experienced during the winter. On only one occasion, January 30 and 31, was there any deficiency in the supply to the Commission from this cause. The power agreement



with the Canadian Niagara Power Company, which expired on April 30, 1939, was renewed with slight modifications for a further period of five years.

Operation of the Chats Falls generating station encountered no special difficulties during the year, although on one occasion, lasting for the greater part of two days, the worst frazil ice conditions since the plant commenced operation were experienced. At one time the output of the plant was confined to one unit, and that under the most difficult operating conditions. Otherwise the full output of the plant, as governed by the Ottawa river flow, was available to the Niagara system.

On the Ottawa river the natural run-off was subnormal during the fall months of 1938 to the extent that it almost equalled the low conditions experienced during the fall of 1933. This condition continued throughout the winter months with the result that the storage reserves were drawn on to the limit in order to maintain a winter flow of 19,000 to 22,000 cubic feet per second. Storage conditions were further impaired, almost to the danger point, by the latest spring thaw since the plant began operation. The spring run-off commenced on April 6, which was about two weeks later than usual. The maximum 24-hour river flow passing the plant was 134,550 cubic feet per second on May 15, and the minimum 24-hour flow for the year, 18,129 cubic feet per second, occurred on February 6. While the total volume of water passing the plant for the year was approximately average, river flow conditions as a whole were less advantageous than usual.

The frequency-changer set at Chats Falls was available as a reserve source of supply for the Eastern Ontario system during the year. The set was used on many occasions, chiefly over the Eastern Ontario system's daily peak periods, to avoid reductions in the supply of secondary power.

The DeCew Falls generating station operated to use all the water available throughout the year. The load demands on the Dominion Power and Transmission division, in excess of the capacity available at the DeCew Falls generating station, were met by the frequency-changer set at Niagara Falls. This set, which was supplied from one of the units at the Toronto Power plant, was used on practically every working day. To complete the usual maintenance schedule at the DeCew Falls generating station, No. 8 generator was taken out of service for general overhaul on October 16. This reduction in capacity, together with increasing load demands, resulted in a shortage of 60-cycle power for the Dominion Power and Transmission division which was met by a temporary supply of approximately 5,000 horsepower from a generating station of the Department of Transport on the Welland Ship canal.

The Hamilton steam station was available during the year as a limited standby reserve for the Dominion Power and Transmission division. The steam station rendered assistance on one day, December 28, 1938, when the output of the DeCew Falls generating station was restricted due to a large accumulation of frazil ice in the forebay. Up to this time the normal operating practice was to keep one of the two steam units available for power purposes, and the generator of the other unit was operated as a synchronous condenser floating on the Hamilton section of the 60-cycle system. On December 28, 1938, the operation of the one generator as a synchronous condenser was discontinued. The boiler plant was used for generation of steam for commercial purposes throughout the year.

Under the terms of the Quebec power agreements an additional 80,000 horsepower became available to the Niagara system on November 1, 1938. Power supplies during the year from the Quebec sources were:—Gatineau Power Company 200,000 horsepower, Beauharnois Light, Heat and Power Company 150,000 horsepower, Maclaren-Quebec Power Company 60,000 horsepower and the Ottawa Valley Power Company 96,000 horsepower, making a total delivery from eastern sources, including the Commission's half of the Chats Falls plant, of 602,000 horsepower.

NIAGARA SYSTEM—LOADS OF MUNICIPALITIES—1938-1939

Municipality	Peak load in horsepower		Change in load	
	July to Dec., 1938	July to Dec., 1939	Decrease	Increase
Acton	977.3	1,082.8	....	105.5
Agincourt	185.6	230.8	....	45.2
Ailsa Craig	126.0	126.7	....	0.7
Alvinston	97.6	100.5	....	2.9
Amherstburg	880.7	942.6	....	61.9
Ancaster Township	403.1	447.9	....	44.8
Arkona	62.0	58.8	3.2	....
Aurora	1,261.4	1,325.7	....	64.3
Aylmer	720.3	873.7	....	153.4
Ayr	217.4	236.3	....	18.9
Baden	350.6	368.0	....	17.4
Beachville	481.7	520.6	....	38.9
Beamsville	460.6	441.4	19.2	....
Belle River	180.9	179.1	1.8	....
Blenheim	541.3	604.3	....	63.0
Blyth	119.1	140.4	....	21.3
Bolton	176.6	190.3	....	13.7
Bothwell	136.7	146.0	....	9.3
Brampton	2,952.7	2,932.5	20.2	....
Brantford	16,214.0	17,465.6	....	1,251.6
Brantford Township	790.8	910.2	....	119.4
Bridgeport	146.0	144.2	1.8	....
Brigden	89.0	85.4	3.6	....
Bronte	192.3	219.8	....	27.5
Brussels	144.3	156.2	....	11.9
Burford	192.1	212.4	....	20.3
Burgessville	49.2	58.3	....	9.1
Burlington	1,376.0	1,302.3	73.7	....
Burlington Beach	474.3	434.5	39.8	....
Caledonia	412.8	403.6	9.2	....
Campbellville	35.1	38.3	....	3.2
Cayuga	140.4	156.3	....	15.9
Chatham	6,555.2	6,944.4	....	389.2
Chippawa	321.2	319.6	1.6	....
Clifford	86.4	101.5	....	15.1
Clinton	614.7	631.4	....	16.7
Comber	167.5	145.6	21.9	....
Cottam	84.3	85.8	....	1.5
Courtright	47.0	49.7	....	2.7
Dashwood	85.2	92.3	....	7.1
Delaware	73.7	75.7	....	2.0
Delhi	660.8	781.5	....	120.7
Dorchester	126.4	126.6	....	0.2
Drayton	128.0	133.1	....	5.1
Dresden	396.8	434.3	....	37.5
Drumbo	99.7	114.3	....	14.6
Dublin	88.0	103.5	....	15.5
Dundas	1,959.1	2,202.3	....	243.2
Dunnville	1,193.1	1,363.2	....	170.1
Dutton	271.8	266.1	5.7	....

NIAGARA SYSTEM—LOADS OF MUNICIPALITIES—1938-1939—Continued

Municipality	Peak load in horsepower		Change in load	
	July to Dec., 1938	July to Dec., 1939	Decrease	Increase
Elmira	807.6	769.3	38.3	
Elora	397.0	412.1		15.1
Embro	152.5	124.9	27.6	
Erieau	151.4	175.3		23.9
Erie Beach	51.2	45.4	5.8	
Essex	643.5	495.0	148.5	
Etobicoke Township	6,561.9	7,216.0		654.1
Exeter	557.6	638.1		80.5
Fergus	1,273.4	1,239.9	33.5	
Fonthill	146.1	182.3		36.2
Forest	483.1	511.2		28.1
Forest Hill	7,994.6	8,253.4		258.8
Galt	7,709.0	8,906.6		1,197.6
Georgetown	1,386.8	1,587.2		200.4
Glencoe	233.8	220.4	13.4	
Goderich	1,308.7	1,385.1		76.4
Granton	75.7	74.8	0.9	
Grimsby	1,040.0	993.3	46.7	
Guelph	10,223.2	11,016.6		793.4
Hagersville	810.7	1,018.9		208.2
Hamilton	104,000.0	128,241.0		24,241.0
Harriston	398.9	438.9		40.0
Harrow	542.6	589.8		47.2
Hensall	178.1	243.6		65.5
Hespeler	2,044.0	2,594.8		550.8
Highgate	82.8	94.1		11.3
Humberstone	480.4	556.7		76.3
Ingersoll	2,470.4	2,677.7		207.3
Jarvis	205.9	202.4	3.5	
Kingsville	683.6	736.7		53.1
Kitchener	21,053.7	23,460.0		2,406.3
Lambeth	149.2	150.1		0.9
La Salle	262.0	261.7	0.3	
Leamington	2,930.9	2,599.0	331.9	
Listowel	1,136.7	1,182.3		45.6
London	38,517.6	39,901.5		1,383.9
London Township	596.5	596.0	0.5	
Long Branch	1,120.6	1.145.8		25.2
Lucan	230.4	219.3	11.1	
Lynden	105.3	101.5	3.8	
Markham	359.2	383.5		24.3
Merlin	85.3	109.1		23.8
Merritton	5,819.3	6,118.3		299.0
Milton	1,124.7	1,188.1		63.4
Milverton	347.1	361.9		14.8
Mimico	2,827.0	2,819.0	8.0	
Mitchell	602.5	641.8		39.3
Moorefield	37.8	39.2		1.4
Mount Brydges	108.4	109.6		1.2
Newbury	39.9	41.8		1.9

NIAGARA SYSTEM—LOADS OF MUNICIPALITIES—1938-1939—Continued

Municipality	Peak load in horsepower		Change in load	
	July to Dec., 1938	July to Dec., 1939	Decrease	Increase
New Hamburg	587.8	580.7	7.1	
Newmarket	1,695.8	1,769.4		73.6
New Toronto	7,148.8	8,835.7		1,686.9
Niagara Falls	10,134.0	10,798.9		664.9
Niagara-on-the-Lake	765.4	789.5		24.1
Norwich	409.6	461.1		51.5
Oakville	1,093.8	1,319.0		225.2
Oil Springs	222.1	223.4		1.3
Otterville	120.3	143.4		23.1
Palmerston	487.6	576.4		88.8
Paris	1,376.8	1,754.8		378.0
Parkhill	183.4	185.3		1.9
Petrolia	1,119.0	1,185.2		66.2
Plattsville	89.1	102.9		13.8
Point Edward	1,302.9	1,275.7	27.2	
Port Colborne	2,176.9	2,091.1	85.8	
Port Credit	847.7	922.5		74.8
Port Dalhousie	922.2	912.9	9.3	
Port Dover	416.4	475.2		58.8
Port Rowan	86.9	101.7		14.8
Port Stanley	1,007.0	1,021.2		14.2
Preston	3,173.5	3,307.1		133.6
Princeton	129.4	131.0		1.6
Queenston	137.2	148.4		11.2
Richmond Hill	444.8	482.8		38.0
Ridgetown	571.0	636.5		65.5
Riverside	1,116.9	1,079.0	37.9	
Rockwood	122.6	127.8		5.2
Rodney	185.4	203.6		18.2
St. Catharines	14,673.8	16,106.2		1,432.4
St. Clair Beach	111.2	118.0		6.8
St. George	162.9	135.9	27.0	
St. Jacobs	327.0	378.3		51.3
St. Marys	1,461.6	1,587.6		126.0
St. Thomas	8,024.1	8,471.8		447.7
Sarnia	8,990.9	9,135.3		144.4
Scarboro Township	4,113.9	4,282.6		168.7
Seaforth	558.1	621.2		63.1
Simcoe	2,250.7	2,927.6		676.9
Smithville	414.2	296.0	118.2	
Springfield	67.3	64.3	3.0	
Stamford Township	2,472.6	2,518.9		46.3
Stoney Creek	229.4	246.2		16.8
Stouffville	284.1	272.1	12.0	
Stratford	7,591.5	7,843.8		252.3
Strathroy	1,215.8	1,428.9		213.1
Streetsville	163.5	177.6		14.1
Sutton	441.3	428.5	12.8	
Swansea	2,990.6	3,270.8		280.2
Tavistock	678.2	649.3	28.9	

NIAGARA SYSTEM—LOADS OF MUNICIPALITIES—1938-1939—Concluded

Municipality	Peak load in horsepower		Change in load	
	July to Dec., 1938	July to Dec., 1939	Decrease	Increase
Tecumseh	464.3	419.8	44.5	
Thamesford	209.3	225.2		15.9
Thamesville	249.0	255.8		6.8
Thedford	129.0	150.9		21.9
Thorndale	111.4	77.0	34.4	
Thorold	2,283.0	2,557.6		274.6
Tilbury	709.9	584.4	125.5	
Tillsonburg	1,441.1	1,498.7		57.6
Toronto	362,158.2	383,536.2		21,378.0
Toronto Township	2,549.5	2,858.7		309.2
Trafalgar Township, Area No. 1	467.8	501.7		33.9
Trafalgar Township, Area No. 2	145.5	140.6	4.9	
Wallaceburg	2,584.2	2,629.0		44.8
Wardsville	38.2	41.0		2.8
Waterdown	256.3	258.2		1.9
Waterford	441.0	498.7		57.7
Waterloo	3,978.5	4,269.4		290.9
Watford	292.2	324.1		31.9
Welland	5,917.9	6,587.1		669.2
Wellesley	129.7	126.0	3.7	
West Lorne	137.6	141.8		4.2
Weston	4,021.4	3,981.2	40.2	
Wheatley	165.5	198.7		33.2
Windsor	40,043.5	41,658.2		1,614.7
Woodbridge	447.7	553.6		105.9
Woodstock	6,605.9	7,533.5		927.6
Wyoming	165.5	70.0	95.5	
York Township East	7,776.9	8,335.8		558.9
York Township North	5,074.4	5,624.6		550.2
Zurich	102.4	114.6		12.2

NIAGARA SYSTEM—RURAL POWER DISTRICT LOADS—1938-1939

Rural power district	Peak load in horsepower		Change in load	
	July to Dec., 1938	July to Dec., 1939	Decrease	Increase
Acton	20.0	25.0		5.0
Ailsa Craig	33.9	85.5		51.6
Alvinston	14.4	47.6		33.2
Amherstburg	1,025.0	998.1	26.9	
Aylmer	757.7	878.6		120.9
Ayr	55.5	75.0		19.5
Baden	657.2	753.0		95.8
Beamsville	1,745.2	1,858.8		113.6
Belle River	426.2	462.0		35.8
Blenheim	311.8	338.9		27.1

NIAGARA SYSTEM—RURAL POWER DISTRICT LOADS—1938-1939—Continued

Rural power district	Peak load in horsepower		Change in load	
	July to Dec., 1938	July to Dec., 1939	Decrease	Increase
Bond Lake	1,639.9	1,849.5		209.6
Bothwell	363.1	412.3		49.2
Brampton	292.3	300.6		8.3
Brant	942.3	1,145.3		203.0
Brigden	87.9	112.6		24.7
Burford	273.2	310.5		37.3
Caledonia	636.1	810.7		174.6
Chatham	890.8	997.6		106.8
Chippawa	186.2	195.2		9.0
Clinton	261.4	290.6		29.2
Delaware	559.2	599.9		40.7
Dorchester	629.1	716.9		87.8
Dresden	140.7	170.3		29.6
Drumbo	281.1	330.2		49.1
Dundas	1,030.1	1,046.1		16.0
Dunnville	117.5	144.2		26.7
Dutton	220.2	288.3		68.1
Elmira	132.3	135.9		3.6
Elora	188.2	282.2		94.0
Essex	416.6	458.5		41.9
Exeter	755.7	928.5		172.8
Forest	129.2	175.6		46.4
Galt	330.0	383.4		53.4
Georgetown	244.3	286.7		42.4
Goderich	200.6	209.4		8.8
Grantham	667.6	837.1		169.5
Guelph	696.2	766.2		70.0
Haldimand	459.2	568.3		109.1
Harriston	50.7	52.0		1.3
Harrow	1,053.9	1,148.6		94.7
Ingersoll	688.9	765.2		76.3
Jordan	440.8	642.9		202.1
Keswick	1,487.5	1,557.0		69.5
Kingsville	1,312.4	1,494.3		181.9
Listowel	351.2	417.6		66.4
London	2,577.0	2,757.8		180.8
Lucan	136.9	186.4		49.5
Lynden	268.3	312.4		44.1
Markham	871.0	935.0		64.0
Merlin	309.4	317.2		7.8
Milton	264.6	312.6		48.0
Milverton	166.2	196.5		30.3
Mitchell	352.5	411.9		59.4
Newmarket	461.7	539.8		78.1
Niagara	899.2	955.7		56.5
Norwich	651.6	710.3		58.7
Oil Springs	98.2	117.0		18.8
Palmerston	132.3	149.5		17.2
Petrolia	70.9	121.0		50.1
Preston	1,677.5	1,695.2		17.7

NIAGARA SYSTEM—RURAL POWER DISTRICT LOADS—1938-1939—Concluded

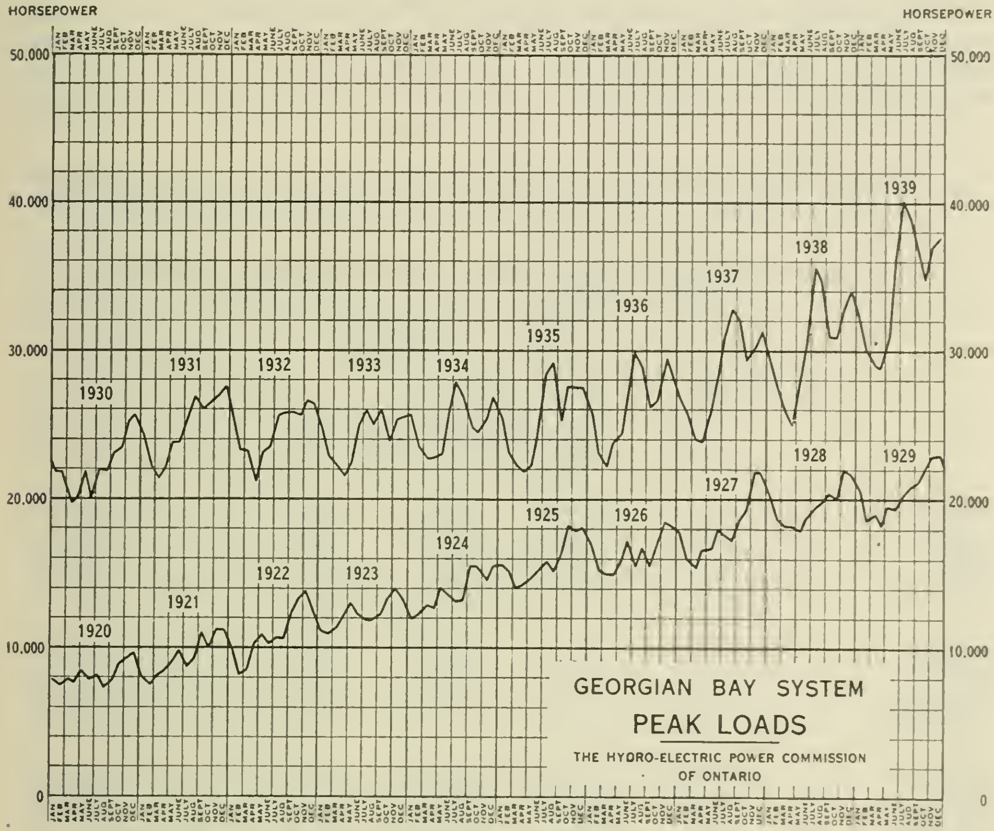
Rural power district	Peak load in horsepower		Change in load	
	July to Dec., 1938	July to Dec., 1939	Decrease	Increase
Ridgetown	605.3	679.5	....	74.2
St. Jacobs	372.6	487.9	....	115.3
St. Marys	561.9	700.1	....	138.2
St. Thomas	1,107.6	1,379.4	....	271.8
Saltfleet	1,529.0	1,802.9	....	273.9
Sandwich	1,487.1	1,602.9	....	115.8
Sarnia	1,028.3	1,153.0	....	124.7
Scarboro	781.0	945.4	....	164.4
Seaforth	84.3	95.7	....	11.4
Simcoe	609.0	655.3	....	46.3
Stamford	295.1	266.2	28.9	....
Stratford	317.1	352.5	....	35.4
Strathroy	232.0	305.6	....	73.6
Streetsville	566.8	698.4	....	131.6
Tavistock	417.0	499.0	....	82.0
Thamesville	235.0	266.0	....	31.0
Tilbury	300.3	340.5	....	40.2
Tillsonburg	724.5	829.5	....	105.0
Wallaceburg	384.3	411.9	....	27.6
Walsingham	722.4	894.6	....	172.2
Walton	207.6	255.8	....	48.2
Waterdown	1,504.2	1,675.2	....	171.0
Waterford	445.7	553.3	....	107.6
Watford	88.7	126.1	....	37.4
Welland	1,760.2	1,920.5	....	160.3
Woodbridge	1,084.2	1,165.8	....	81.6
Woodstock	1,064.6	1,108.9	....	44.3

GEORGIAN BAY SYSTEM

The Georgian Bay system peak load was 13.2 per cent, and the energy distributed 10.4 per cent, in excess of last year. The addition of the Ragged Rapids plant to the system generating sources provided for the increase in system energy requirements and at the same time allowed a decrease in the energy transferred from the Niagara system, this transfer being only 45 per cent of that in 1938.

After November 23, following final tests and adjustments, both units at Ragged Rapids plant were available for service.

As a result of the increased generating capacity provided by the new generating station at Ragged Rapids, assistance was required from Niagara system in November, December, January and June only over peak periods. No assistance was required in February, March, April and May, excepting



for short intervals during line trouble. In July, August, September and October assistance was required to supply both peaks and energy, as system loads were at their maximum in July and August and certain units were out of service in September and October for maintenance.

Assistance was given the Orillia Water, Light and Power Commission to the extent of approximately 32,000 kilowatt-hours between October 14 and 31. This was required due to low river flows past Orillia plants.

The only serious interruptions of power service occurred December 27 when rain and soft snow, followed by a sudden drop in temperature and accompanied by extremely high wind, caused violent whipping of transmission lines, and customers in Owen Sound area had a series of interruptions totalling four to five hours. As a result of this storm the town of Wingham also was without power for nearly 24 hours, due to failure of power transformers in Wingham distributing station. Line patrol and other work incidental to the restoration of service was made extremely difficult owing to the practically impassable condition of snow-blocked roads.

The automatic reclosing feature placed in service on tie line and radial feeder oil switches at Waubaushene and Fergusonvale auto-transformer stations during the year has resulted in adding still further to the continuity of service.

At Eugenia Falls generating station the wooden housing of No. 2 surge tank was destroyed by fire April 29, 1939. Repairs were made to the concrete pedestals supporting this tank. The steel tank and supporting columns were cleaned off and painted, following which reconstruction of the housing was undertaken by the Construction department.

At Sauble Falls generating station all hydraulic and electrical equipment was removed to storage, the old building demolished and the site cleaned up.

GEORGIAN BAY SYSTEM—LOADS OF MUNICIPALITIES—1938-1939

Municipality	Peak load in horsepower		Change in load	
	July to Dec., 1938	July to Dec., 1939	Decrease	Increase
Alliston	330.3	355.7		25.4
Arthur	170.3	183.2		12.9
Bala	309.0	359.0		50.0
Barrie	3,067.2	3,931.0		863.8
Beaverton	289.5	338.1		48.6
Beeton	113.2	100.4	12.8	
Bradford	196.6	202.1		5.5
Brechin	87.3	78.7	8.6	
Cannington	181.2	196.2		15.0
Carlsruhe	5.0	5.0		
Chatsworth	77.6	86.4		8.8
Chesley	574.8	600.3		25.5
Coldwater	330.9	367.9		37.0
Collingwood	1,694.4	1,694.2	0.2	
Cookstown	93.7	82.6	11.1	
Creemore	134.0	146.4		12.4
Dundalk	218.7	258.5		39.8
Durham	509.2	398.5	110.7	
Elmvale	166.2	226.2		60.0
Elmwood	64.0	74.3		10.3
Flesherton	80.8	89.6		8.8
Grand Valley	147.2	164.1		16.9
Gravenhurst	1,001.6	1,037.9		26.3
Hanover	1,135.6	1,202.9		67.3
Hepworth	29.0	32.8		3.8
Holstein	21.8	20.1	1.7	
Huntsville	1,134.5	1,255.8		121.3
Kincardine	746.6	753.4		6.8
Kirkfield	27.0	28.0		1.0
Lucknow	280.4	270.8	9.6	
MacTier	149.0	149.0		
Markdale	188.2	235.5		47.3
Meaford	766.8	622.6	144.2	
Midland	3,131.8	3,481.7		349.9
Mildmay	124.8	135.7		10.9
Mount Forest	573.3	608.4		35.1
Neustadt	39.1	49.3		10.2
Orangeville	695.5	781.7		86.2
Owen Sound	4,380.0	4,567.8		187.8
Paisley	134.7	145.2		10.5

GEORGIAN BAY SYSTEM—LOADS OF MUNICIPALITIES—1938-1939—Concluded

Municipality	Peak load in horsepower		Change in load	
	July to Dec., 1938	July to Dec., 1939	Decrease	Increase
Penetang	767.0	874.8	....	107.8
Port Carling	302.0	299.0	3.0	....
Port Elgin	454.0	506.9	....	52.9
Port McNicoll	90.4	104.7	....	14.3
Port Perry	307.7	315.5	....	7.8
Priceville	16.6	10.0	6.6	....
Ripley	77.0	96.8	....	19.8
Rosseau	63.3	53.6	9.7	....
Shelburne	248.1	262.7	....	14.6
Southampton	435.7	440.4	....	4.7
Stayner	311.6	332.5	....	20.9
Sunderland	81.3	95.2	....	13.9
Tara	108.8	114.1	....	5.3
Teeswater	149.6	173.3	....	23.7
Thornton	30.5	40.3	....	9.8
Tottenham	85.7	99.4	....	13.7
Uxbridge	297.0	341.7	....	44.7
Victoria Harbour	75.0	87.2	....	12.2
Walkerton	732.6	820.2	....	87.6
Waubaushene	138.7	161.9	....	23.2
Wiarton	320.7	463.2	....	142.5
Windermere	96.9	104.8	....	7.9
Wingham	487.2	532.2	....	45.0
Woodville	88.8	93.0	....	4.2

GEORGIAN BAY SYSTEM—RURAL POWER DISTRICT LOADS—1938-1939

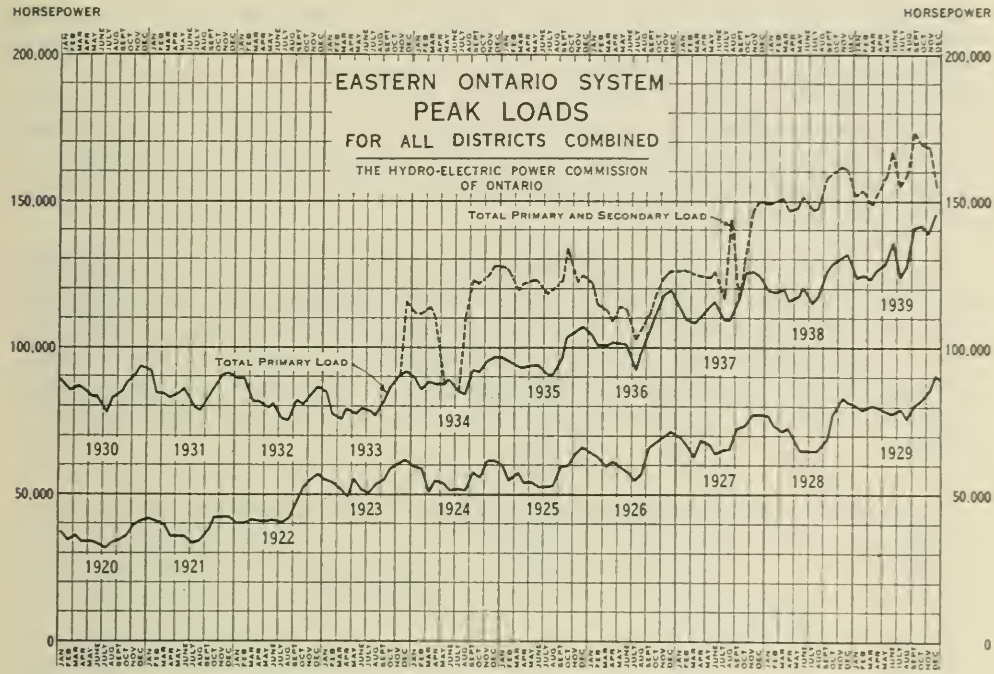
Rural power district	Peak load in horsepower		Change in load	
	July to Dec., 1938	July to Dec., 1939	Decrease	Increase
Alliston	149.5	192.7	....	43.2
Arthur	12.0	27.5	....	15.5
Bala	391.0	554.0	....	163.0
Barrie	678.5	781.1	....	102.6
Baysville	183.2	225.9	....	42.7
Beaumaris	639.4	677.3	....	37.9
Beaverton	370.1	462.5	....	92.4
Beeton	5.0	5.0	....	....
Bradford	96.1	106.2	....	10.1
Bruce	327.0	430.5	....	103.5
Buckskin	25.7	30.7	....	5.0
Cannington	100.6	110.5	....	9.9
Chatsworth	12.6	30.2	....	17.6
Cookstown	2.5	4.5	....	2.0
Creemore	123.6	146.0	....	22.4

GEORGIAN BAY SYSTEM—RURAL POWER DISTRICT LOADS—1938-1939 —Concluded

Municipality	Peak load in horsepower		Change in load	
	July to Dec., 1938	July to Dec., 1939	Decrease	Increase
Dundalk	34.5	39.1		4.6
Elmvale	138.5	117.0	21.5	
Flesherton	53.9	52.7	1.2	
Gravenhurst	103.0	98.5	4.5	
Hawkestone	227.8	257.4		29.6
Holstein	5.8	23.5		17.7
Huntsville	269.6	377.3		107.7
Innisfil	809.6	944.6		135.0
Kirkfield	34.0	46.0		12.0
Lucknow	18.5	25.0		6.5
Mariposa	233.2	271.0		37.8
Markdale	55.0	62.0		7.0
Meaford	134.2	157.9		23.7
Medonte	195.7	255.4		59.7
Midland	420.0	526.6		106.6
Minden	89.8	147.0		57.2
Mount Forest		24.8		
Neustadt	8.3	54.6		46.3
Nottawasaga	58.3	61.4		3.1
Orangeville	137.8	167.7		29.9
Owen Sound	134.6	145.9		11.3
Port Perry	241.3	286.6		45.3
Ripley	98.4	128.8		30.4
Sauble	115.8	126.5		10.7
Shelburne	42.7	51.6		8.9
South Falls	9.0	18.0		9.0
Sparrow Lake	326.5	406.7		80.2
Tara	120.0	155.7		35.7
Thornton	22.3	26.2		3.9
Tottenham	16.5	31.5		15.0
Utterson	229.7	272.6		42.9
Uxbridge	150.7	169.4		18.7
Wasaga Beach	742.6	952.6		210.0
Wroxeter	183.7	226.6		42.9

EASTERN ONTARIO SYSTEM

The load on the Eastern Ontario system reflected a slowing down in industrial activities during the earlier months of the fiscal year. However, beginning with the month of April the primary peak demand showed a substantial increase which continued until the end of the calendar year. The primary energy demand showed a slight decrease during the months of November and December, 1938, and then continued at a slightly less than normal rate of increase until the month of September when a substantial increase was shown which continued until the end of the calendar year 1939. The primary peak, which amounted to 141,908 horsepower in the month of



October, 1939, represented an increase of 10.4 per cent over the corresponding month of the previous year and exceeded all recorded maxima. The total primary energy, which amounted to 495,464,255 kilowatt-hours, represented an increase of 3.3 per cent over the previous fiscal year.

Secondary energy, amounting to a total of 157,132,500 kilowatt-hours, was delivered to the steam generator at the Howard Smith Paper Mills at Cornwall. Of this amount, 114,800,000 kilowatt-hours were supplied direct from Eastern Ontario system generating and purchased sources, and the balance by transfer from the Niagara system. Compared with the previous year, the total output of secondary energy from all sources represented an increase of 4.5 per cent.

In order to improve local operating conditions and provide increased service security to customers in Prince Edward county, a new section of 44,000-volt line, approximately 4.7 miles in length, was placed in service on January 15, thereby providing a direct source of supply to the above customers from Sidney terminal station.

The newly constructed 44,000-volt line between Sills Island generating station near Frankford and Sidney terminal station, together with a new 3-phase, 3,000-kv-a transformer station, was placed in service on February 19.

The system power resources, including generating capacity and power purchased under contract, were at all times sufficient to meet all primary demands. On one occasion, however, as a result of serious damage to the 44,000-volt line network caused by winds of cyclonic proportions on September 8, it became necessary to operate the frequency-changer set at Chats Falls in order to meet the primary demand of the Central Ontario district.

Stream flow conditions on the Trent river were, on the whole, fairly satisfactory throughout the year. Rainfall was considerably below normal during months of May and June. July average was well above normal, but actually the dry period lasted until July 27, the total for the month being brought above normal by exceptionally heavy rainfall during the last four days. Precipitation remained practically normal during the months of August and September, but dropped to approximately 89 per cent of normal during the month of October.

During the year the usual programme of general plant inspection and maintenance was carried out. A number of turbines were unwatered and inspected, and necessary repairs and adjustments made. The governors in the various plants were inspected and adjusted. Several of the forebays were unwatered, racks cleaned, sunken debris removed, and the concrete carefully inspected. Lightning arresters were overhauled during the winter season.

EASTERN ONTARIO SYSTEM—LOADS OF MUNICIPALITIES—1938-1939

Municipality	Peak load in horsepower		Change in load	
	July to Dec., 1938	July to Dec., 1939	Decrease	Increase
Alexandria	229.2	229.8	....	0.6
Apple Hill	46.1	55.0	....	8.9
Arnprior	1,005.0	1,176.1	....	171.1
Athens	123.3	119.8	3.5	....
Bath	47.3	52.1	....	4.8
Belleville	5,560.1	6,172.4	....	612.3
Bloomfield	126.4	124.4	2.0	....
Bowmanville	2,404.3	2,622.6	....	218.3
Braeside	167.6	234.6	....	67.0
Brighton	369.0	424.7	....	55.7
Brockville	3,868.6	3,920.0	....	51.4
Cardinal	258.4	319.5	....	61.1
Carleton Place	1,682.2	1,731.9	....	49.7
Chesterville	283.2	293.4	....	10.2
Cobden	77.0	75.1	1.9	....
Cobourg	1,749.3	2,104.4	....	355.1
Colborne	222.5	229.8	....	7.3
Deseronto	165.5	182.6	....	17.1
Finch	85.3	101.0	....	15.7
Frankford	113.9	155.8	....	41.9
Hastings	102.8	116.8	....	14.0
Havelock	171.1	188.8	....	17.7
Kemptville	413.2	423.7	....	10.5
Kingston	9,816.4	10,414.3	....	597.9
Lakefield	294.6	319.3	....	24.7
Lanark	85.8	92.6	....	6.8
Lancaster	53.8	56.8	....	3.0
Lindsay	2,507.5	2,817.0	....	309.5
Madoc	204.4	213.8	....	9.4
Marmora	140.9	151.1	....	10.2

EASTERN ONTARIO SYSTEM—LOADS OF MUNICIPALITIES—1938-1939—Concluded

Municipality	Peak load in horsepower		Change in load	
	July to Dec., 1938	July to Dec., 1939	Decrease	Increase
Martintown	40.2	42.2	....	2.0
Maxville	103.2	118.0	....	14.8
Millbrook	84.4	97.5	....	13.1
Morrisburg	244.6	207.4	37.2	....
Napanee	1,340.5	1,311.1	29.4	....
Newburg	42.3	40.3	2.0	....
Newcastle	147.2	170.3	....	23.1
Norwood	142.1	171.3	....	29.2
Omemee	129.8	183.6	....	53.8
Orono	107.3	97.2	10.1	....
Oshawa	15,803.3	16,583.1	....	779.8
Ottawa	30,589.4	31,344.3	....	754.9
Perth	1,551.3	1,572.4	....	21.1
Peterborough	9,783.0	11,805.4	....	2,022.4
Picton	1,158.8	1,280.2	....	121.4
Port Hope	1,906.7	2,145.0	....	238.3
Prescott	1,053.8	1,129.4	....	75.6
Richmond	54.9	73.7	....	18.8
Russell	68.8	72.8	....	4.0
Smiths Falls	2,300.1	2,426.7	....	126.6
Stirling	337.8	334.4	3.4	....
Trenton	3,625.6	3,976.3	....	350.7
Tweed	246.2	271.4	....	25.2
Warkworth	86.0	90.5	....	4.5
Wellington	253.5	254.7	....	1.2
Westport	92.5	96.8	....	4.3
Whitby	1,308.3	1,355.2	....	46.9
Williamsburg	185.6	180.8	4.8	....
Winchester	331.2	342.1	....	10.9

EASTERN ONTARIO SYSTEM—RURAL POWER DISTRICT LOADS—1938-1939

Rural power district	Peak load in horsepower		Change in load	
	July to Dec., 1938	July to Dec., 1939	Decrease	Increase
Alexandria	82.4	95.0	....	12.6
Arnprior	383.4	502.5	....	119.1
Belleville	566.5	606.6	....	40.1
Bowmanville	118.8	150.9	....	32.1
Brighton	28.0	30.0	....	2.0
Brockville	506.1	584.7	....	78.6
Calabogie	48.3	67.6	....	19.3
Campbellford	117.7	117.8	....	0.1
Carleton Place	53.0	78.8	....	25.8
Chesterville	417.6	410.8	6.8	....

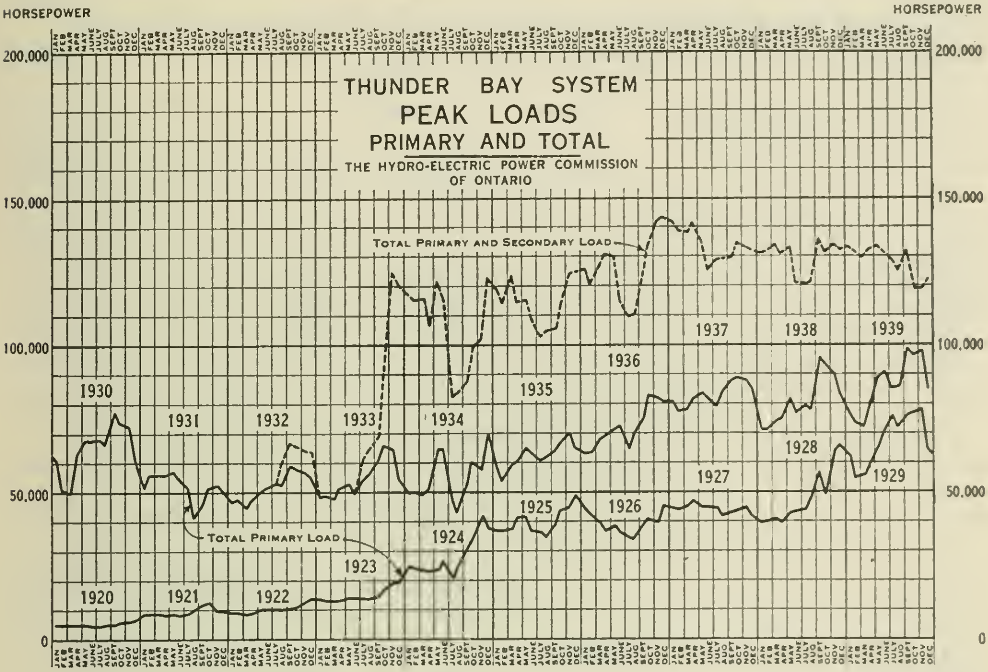
EASTERN ONTARIO SYSTEM—RURAL POWER DISTRICT LOADS—1938-1939 —Concluded

Municipality	Peak load in horsepower		Change in load	
	July to Dec., 1938	July to Dec., 1939	Decrease	Increase
Cobourg	456.4	547.7		91.3
Colborne	173.7	198.0		24.3
Cornwall		20.0		
Fenelon Falls	336.1	419.6		83.5
Iroquois	573.7	590.9		17.2
Kemptville	40.3	44.1		3.8
Kingston	735.5	882.0		146.5
Lakefield	144.5	177.6		33.1
Madoc	9.0	56.1		47.1
Marmora	15.5	12.0	3.5	
Martintown	147.8	174.2		26.4
Maxville	383.5	486.4		102.9
Millbrook	77.1	95.2		18.1
Napanee	447.2	471.7		24.5
Nepean	1,083.7	1,213.1		129.4
Newcastle	90.5	110.7		20.2
Norwood	64.1	64.3		0.2
Omemee	23.2	35.0		11.8
Oshawa	1,261.6	1,447.8		186.2
Pembroke		25.0		
Perth	145.0	189.8		44.8
Peterborough	792.3	799.9		7.6
Prescott	182.1	235.0		52.9
Renfrew	118.0	130.0		12.0
Smiths Falls	312.2	357.0		44.8
Stirling	91.6	146.4		54.8
Sulphide	35.0	34.0	1.0	
Trenton	162.6	229.8		67.2
Warkworth	30.7	44.2		13.5
Wellington	459.7	518.4		58.7
Williamsburg	97.0	132.4		35.4

THUNDER BAY SYSTEM

The maximum twenty-minute peak of the primary load on the Thunder Bay system was 98,934 horsepower. This is 3.2 per cent greater than in 1938, and is the highest primary peak in the history of this system. The primary energy showed an increase of 2.7 per cent over last year.

The market for secondary power (used by paper mills for the electrical generation of steam) was great enough to utilize more than the remaining available generating capacity for the major portion of the time. Arrangements have, therefore, been in force, similar to those existing in 1938, whereby the paper mills under the control of the Abitibi Power and Paper Company were permitted to obtain further secondary power from the Kaministiquia Power Company, a subsidiary of the Abitibi Power and Paper Company, through the Commission's transformers and over the Commission's transmission circuits.



There has been no restriction of primary power supply to any customer and no serious interruption to service. It has been necessary on occasions to restrict the secondary load demands of customers for short periods, in order to carry the system load with satisfactory frequency and voltage regulation. During the latter part of the summer it became apparent the inflow into lake Nipigon was below normal, and the system was, therefore, limited to an average weekly withdrawal of 8,400 cubic feet per second, which flow was fully utilized. This resulted in a slight decrease in the amount of energy available for secondary power.

The generating and transformer stations have all functioned reliably throughout the year. During the period March 25 to April 15, number 3 unit at Alexander generating station was out of service while repairs were made to the thrust bearing which had become defective.

Routine maintenance work on the generator units at Cameron Falls and Alexander generating station has been done when the load permitted individual units to be temporarily released from service.

Service on the 110,000-volt lines to Long Lac transformer station and the 44,000-volt lines supplying power to the mines in the Beardmore, Bankfield and Little Long Lac areas has been satisfactory, but there have been a number of occasions when service has been interrupted due to flashover during electrical storms, trees falling over the line and highway blasting operations. In some sections the route of the lines has been altered in order to provide satisfactory clearance for the new Trans-Canada highway.

The precipitation of the watershed supplying this system has been 25.0 inches which is about average for this district. The elevation of lake Nipigon on October 31 was 850.94 as compared with 852.04 for the same time last year.

THUNDER BAY SYSTEM—LOADS OF MUNICIPALITIES—1938-1939

Municipality	Peak load in horsepower		Change in load	
	July to Dec., 1938	July to Dec., 1939	Decrease	Increase
Beardmore	105.0	131.0	....	26.0
Fort William	13,841.8	13,597.8	244.0	....
Geraldton	522.8	551.0	....	28.2
Nipigon Township	176.9	179.9	....	3.0
Port Arthur	40,646.2	41,481.2	....	835.0

THUNDER BAY SYSTEM—RURAL POWER DISTRICT LOADS—1938-1939

Rural power district	Peak load in horsepower		Change in load	
	July to Dec., 1938	July to Dec., 1939	Decrease	Increase
Thunder Bay*	398.5	437.9	....	39.4
Nipigon	....	5.0	....	....

*Amalgamation of Fort William and Port Arthur rural power districts.

MANITOULIN DISTRICT

Operating conditions were normal on the Manitoulin district during the year. The load trend was upward, due largely to extensions to the rural system.

NORTHERN ONTARIO PROPERTIES

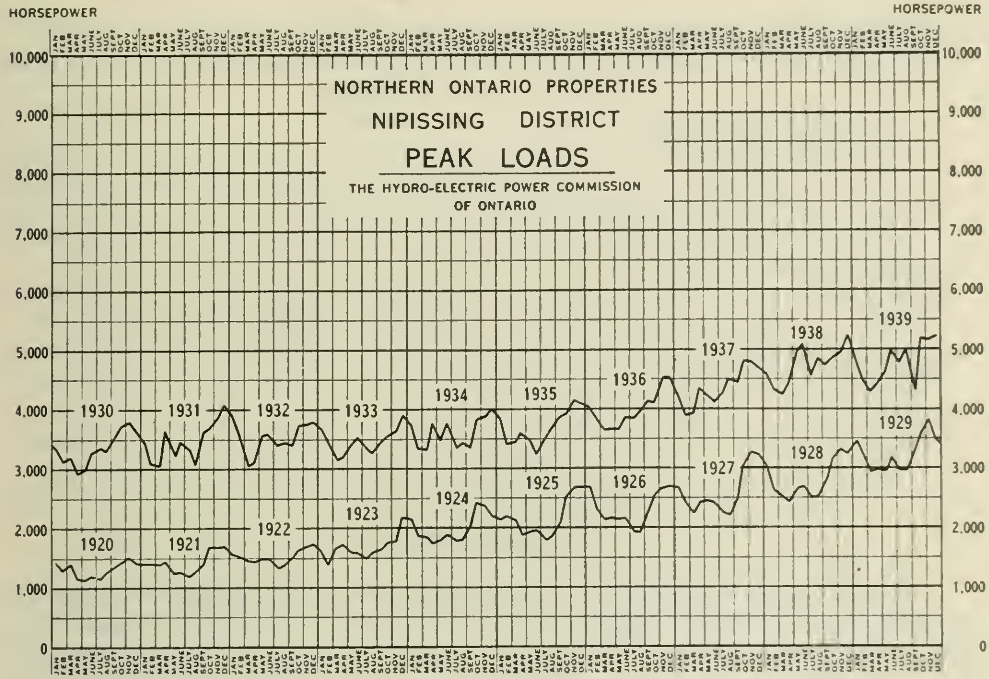
Nipissing District

During the peak load period, November, 1938, to January, 1939, it was necessary to transfer power to the district over the tie line from Crystal Falls generating station. Owing to lack of precipitation and increasing loads, and to conserve available storage water during the latter part of the year, energy was transferred to the district from Crystal Falls generating station.

Sudbury District

Operating conditions were normal during the year.

Anticipating future load increases, which will necessitate the operating voltage of the Crystal Falls-Coniston line being increased, this line was taken out of service during parts of the day during the low-load period, August 1 to August 15, to re-insulate it for 110,000-volt operation.


HORSEPOWER
HORSEPOWER
NORTHERN ONTARIO PROPERTIES
NIPISSING DISTRICT
PEAK LOADS
THE HYDRO-ELECTRIC POWER COMMISSION OF ONTARIO
10,000
9,000
8,000
7,000
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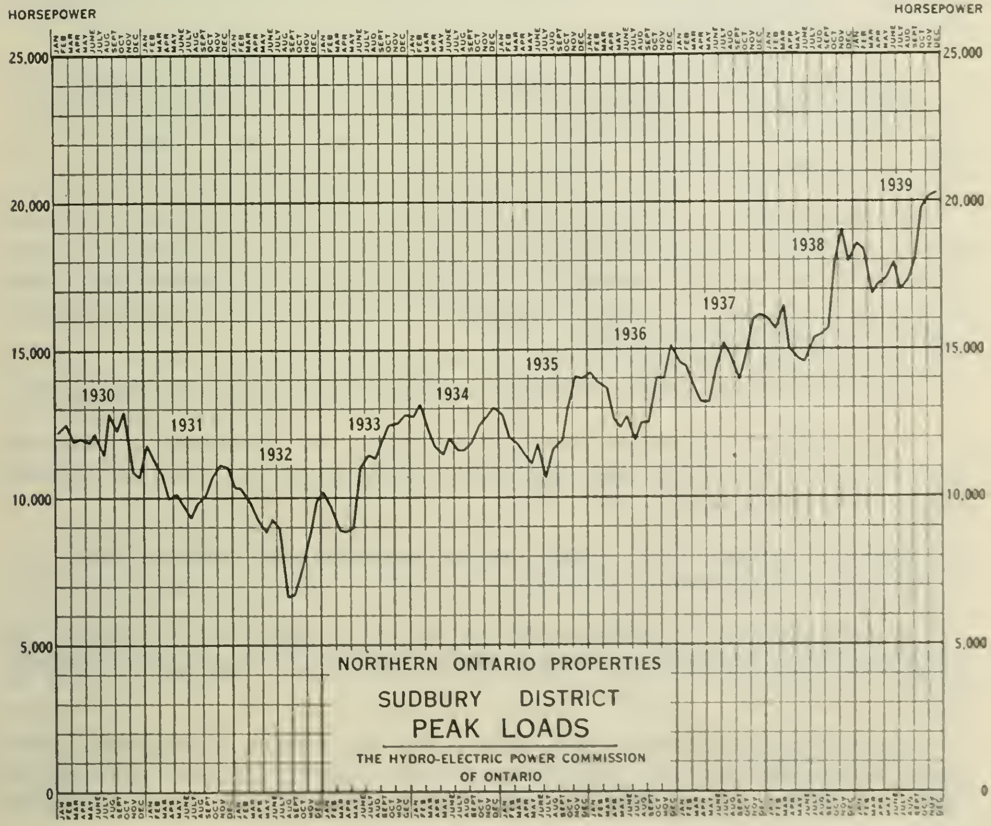
HORSEPOWER
HORSEPOWER
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NORTHERN ONTARIO PROPERTIES
SUDBURY DISTRICT
PEAK LOADS
THE HYDRO-ELECTRIC POWER COMMISSION OF ONTARIO
JAN FEB MAR APR MAY JUNE JULY AUG SEPT OCT NOV DEC

NON-SYSTEM PROPERTIES—RURAL POWER DISTRICT LOADS—1938-1939

Rural power district	Peak load in horsepower		Change in load	
	July to Dec., 1938	July to Dec., 1939	Decrease	Increase
NIPISSING DISTRICT				
North Bay	356.3	446.1	....	89.8
Powassan	12.5	18.0	....	5.5
MANITOULIN DISTRICT				
Manitoulin	257.3	305.6	....	48.3
SUDBURY DISTRICT				
Sudbury	120.9	324.3	....	203.4

Abitibi District

The stream flow at Abitibi Canyon was at all times adequate to generate primary and secondary load demands. Two-way radiophone communication, which was installed at Timmins transformer station and at Frederick House Lake dam to facilitate efficient control of the Frederick House Lake storage basin, was placed in service on April 8 and operated satisfactorily throughout the remainder of the year.

The operation of Abitibi Canyon generating station was satisfactory throughout the year. Tailrace gates, with a motor-driven handling mechanism, which were installed during December, have greatly facilitated the unwatering of draft tubes for inspection and maintenance purposes.

During January, fourteen newly completed operators' houses and a new recreation hall at Abitibi Canyon were occupied. The new houses replace temporary construction dwellings which many of the permanent staff had been occupying, and the new recreation hall adds greatly to entertainment facilities in this isolated colony.

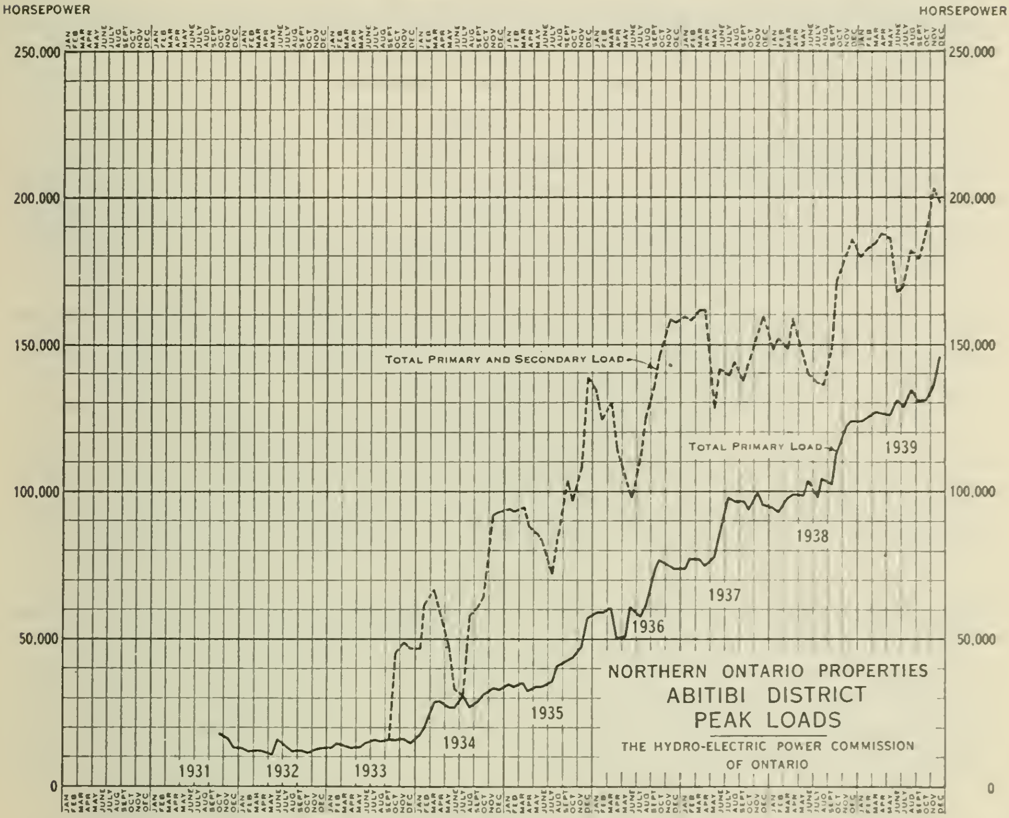
All transformer stations operated satisfactorily throughout the year.

The 1,000-kv-a Bourkes transformer station was permanently removed from service in November, the sole mining customer served from this station having abandoned operations.

Service to Ronda Gold Mines was discontinued on October 17 and that to Kirkland Gold Rand on June 21.

A new 1,000-kv-a transformer station at Shiningtree, in which the equipment from Bourkes had been utilized, was placed in service on December 20.

There were seventeen single-circuit and fourteen double-circuit automatic outages on the high-tension line between Abitibi Canyon and Copper Cliff. Of these, twenty-five were attributed to lightning, three to inter-

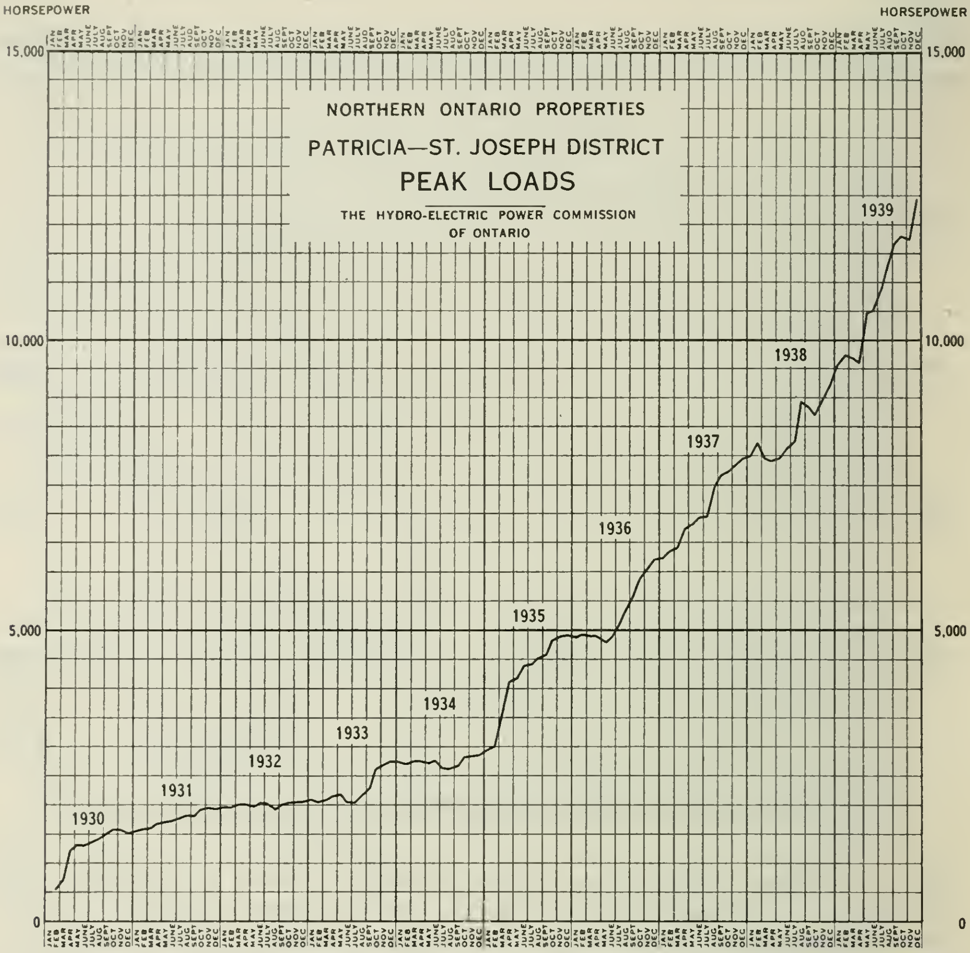


ference between telephone and power conductors during a windstorm, one to failure of a power conductor jumper, one to a rope being blown across the conductors and one to an undetermined cause. A three-hour pre-arranged double-circuit outage was necessary in July to permit repairs to a ground wire which was badly damaged by lightning.

There were sixteen automatic outages on the high-tension line between Abitibi Canyon and Kirkland Lake, Larder Lake and Matachewan. Of these, five were attributed to lightning, eight to windstorms, one to a fallen tree, and two to causes external to the line.

Patricia-St. Joseph District

The fiscal year was marked by the placing in service of three new 44,000-volt transmission lines; one transformer station; two distributing stations, and the provision of power to five new customers. Since September 4, when the 113-mile 44,000-volt transmission line between Uchi lake and Pickle lake was placed in service, together with the Crow River transformer station, the Patricia and St. Joseph districts have been operated in parallel, and in future will be known as Patricia-St. Joseph district. The load of these combined districts shows a considerable increase, the maximum yearly twenty-minute peak being 32 per cent higher, and the energy generated being 29 per cent greater than in the previous year.



On November 28, 1938, operations at the Red Lake Gold Shore Mines were recommenced under the control and name of Hasaga Gold Mines. The construction of a 44,000-volt wood-pole line, 49 miles long, between Ear Falls generating station and Uchi Gold Mines was completed, and this customer received power on January 15. The mill at Uchi Gold Mines commenced operation in May. Power was supplied to Cochenour-Willians Gold Mines on January 19, over a short 44,000-volt tap line, and on July 26 McMarmac Mines received power at 2,300-volts through the Cochenour-Willians Gold Mines station. On August 30, a 44,000-volt transmission line, 85 miles in length, between Ear Falls generating station and a new distributing station at Sioux Lookout, was placed in service, supplying power to this municipality. A distributing station was also connected to this line at Hudson, and power was supplied to this municipality on October 27. The Albany River Gold Mines recommenced operations on October 15, under the control of the Pickle Crow Gold Mines.

A five-mile section of 22,000-volt transmission line between Crow River transformer station and Pickle Crow Gold Mines was placed in service in September, with selective switches at three junctions so that the customers could be supplied from this new line or the original line.

The flow in the English river has been regulated and controlled by means of the Lac Seul conservation dam at Ear Falls as required by the Lake-of-the-Woods Control Board.

All electrical and hydraulic equipment at Rat Rapids generating station on the Albany river has functioned satisfactorily, routine inspections and maintenance only being required. During September and October the Rat Rapids generating station was operated at full capacity and at a high load factor in order to utilize the high inflow to lake St. Joseph without wastage of water.

The 44,000 and 22,000-volt transmission lines have operated satisfactorily and have been maintained in good condition. Eight new patrol points, four of them in very remote country, have been established to take care of the new line sections. There were twelve occasions on which outages occurred on the transmission lines during electrical storms. On two of these occasions poles and crossarms were shattered and had to be replaced. A forest fire along the right-of-way of the Ear Falls-Uchi line caused damage to a few poles and crossarms; the poles were stubbed and the crossarms replaced.

The precipitation in the vicinity of Ear Falls generating station has been above average, 26.95 inches being recorded. The elevation of Lac Seul on October 31 was 1,170.05 as compared with 1,170.65 at the same date last year. The precipitation in the vicinity of Rat Rapids generating station was relatively high, a total of 30.41 inches being recorded. The elevation of lake St. Joseph on October 31 was 1,226.49 as compared with 1,225.54 for the same date last year.

NORTHERN ONTARIO PROPERTIES—LOADS OF MUNICIPALITIES—1938-1939

NIPISSING DISTRICT

Municipality	Peak load in horsepower		Change in load	
	July to Dec., 1938	July to Dec., 1939	Decrease	Increase
Callander	150.4	161.1	...	10.7
Nipissing	3.0	3.0	...	...
North Bay	4,020.7	4,228.3	...	207.6
Powassan	153.2	182.4	...	29.2
SUDBURY DISTRICT				
Capreol	195.7	211.9	...	16.2
Sudbury	8,230.3	9,150.3	...	920.0
ABITIBI DISTRICT				
Hislop Townsite	25.7	39.1	...	13.4
Kearns Townsite	...	111.0	...	...
King Kirkland Townsite	35.5	46.1	...	10.6
Matachewan Townsite	137.4	179.6	...	42.2
Mooretown Townsite	53.3	41.0	12.3	...
Ramore-Matheson Townsite	123.7	120.0	3.7	...
PATRICIA-ST. JOSEPH DISTRICT				
Hudson Townsite	...	78.7	...	
Sioux Lookout	...	289.8	...	.

SECTION III

MUNICIPAL WORK

THE Commission acts in an advisory capacity to the municipalities with which it has contracts, and assists the municipal officials to purchase, construct or extend distribution systems. As provided under *The Power Commission Act*, all rate adjustments are approved by the Commission, therefore, a study of the operating conditions of all utilities is made annually and adjustments recommended.

In rural power districts, the Commission on behalf of the township corporations operates the rural power systems, and distributes electrical energy to the customers of the respective corporations in all such rural power districts.

NIAGARA SYSTEM

Under the terms of contracts entered into during the fiscal year 1938 the Commission took delivery of the following additional amounts of power from:

	horsepower
Gatineau Power Company and Gatineau Transmission Company	35,000
Beauharnois Light, Heat and Power Company and Coteau Rapids Transmission Company Limited	25,000
Maclaren-Quebec Power Company and The James Maclaren Company Limited	20,000
Total additional power taken	80,000

General industrial load conditions were affected by the unrest and uncertain world conditions and the expected normal load increases of the municipal Hydro utilities did not materialize until near the close of the fiscal year. As a result, the average load growth for this system was lower than the expected load.

Engineering Assistance to Municipalities

General engineering assistance was given to nearly all municipalities of the Niagara system respecting the operation and management of their local Hydro utilities.

Certain municipalities received special engineering advice and assistance respecting matters which are more fully referred to below:

Ailsa Craig—Plans were prepared for changing the local distribution system from 4,000 volts to 8,000 volts.

Beamsville—The distribution system is being changed from 66⅔ cycles to 25 cycles. It is expected the actual work of change-over will be completed in 1940.

Blenheim—A new Hydro building costing $10,000 was completed and officially opened April, 1939.

Brantford—All domestic and commercial consumers supplied from the 66⅔-cycle system having had their services changed to 25 cycles, arrangements are being made to complete the change-over to 25-cycle operation of the industrial power customers. This work will be completed early in 1940.

Chatham—A new substation on Queen street costing $39,500 was completed and put in service, thereby adding 1,500 kv-a capacity to the local system.

Dresden—To provide consumers with better facilities for paying their accounts, and also to provide space for displaying merchandise, a new office was arranged for.

Dunnville—Additions and improvements to the substation and the distributing system were undertaken. The major work included conversion from 2,200 volts to 4,000 volts and new switchboard facilities.

Dutton—A rearrangement of the main distribution feeder was completed.

Embro—A major increase in distribution feeder capacity was made to take care of a rapid increase in load.

Fergus—To improve regulation, a change of distribution voltage from 2,200 to 4,000 volts was made.

Forest—At a cost of about $5,000, greater capacity in secondary distribution lines and transformers is being provided.

Forest Hill—The 4,000-volt supply from the Toronto system was changed to feed into the new substation of the local system.

Harrow—On February 1, the Hydro office for the town and rural power districts of Harrow and Amherstburg, was moved into the new community hall.

La Salle—Arrangements were made for a new storehouse and office building.

London—The Public Utilities Commission installed additional underground-feeder cable connecting its main substations. Additional substation transformer capacity was also installed.

Lucan—To improve the lighting and appearance of the business section of the main street, 26 ornamental street-lighting standards with 300-watt lamps were erected. Poles and wires were removed and placed in the rear of the buildings.

Milton—During the year, the local commission arranged for an office building on Main street, including storeroom and garage.

Mitchell—The primary distribution voltage was changed from 1,100 to 4,000 volts.

Mount Brydges—Improved street lighting was installed on the main street.

North York Township—A new distributing station with new 4,000-volt feeders was established in the southern part of the township.

Oil Springs—Arrangements were made for a new office building and storehouse costing approximately $5,500. This building will accommodate the staff of the local system and also the staff of the Oil Springs rural power district.

Parkhill—Extensive changes were made to the distribution system, and arrangements have been made to change the voltage from 4,000 to 8,000 volts.

Ridgetown—The ornamental street-lighting system in the business section of the town was improved by changes in the ornamental standards to give greater mounting height and better light distribution.

St. Jacobs—A large part of the secondary distribution system is being rebuilt.

St. Marys—An office building, together with combined storeroom and garage facilities, were constructed on Wellington street as a much needed improvement in the utility accommodation of the local system.

St. Thomas—A current-carrier control system is being installed at a cost of $22,000. This will control 1,700 water heaters, representing a load of 800 horsepower and will have capacity to handle double this load.

Sarnia—Alterations to the No. 1 substation building were completed at a cost of $6,100 to provide better facilities for garage, storehouse, etc.

Streetsville—The local commission arranged for a suitable office building.

Thamesville—Improved street lighting was provided in the business section of the town by the replacement of the regular pole-type street lamps with ornamental fixtures.

Thorold—Recommendations were made to the municipality with regard to improving the street-lighting system, with special reference to the business section.

Tillsonburg—Arrangements were made to improve substation equipment and distribution system.

Wallaceburg—A new brick, one-storey storehouse and garage was completed at a cost of $6,600. Several additional street lamps were placed in various parts of the town.

GEORGIAN BAY SYSTEM

Load increases were recorded on this system during the year in both urban municipalities and rural power districts. The increase in the total system average load sold over 1938 was 8.6 per cent and the increase in the maximum peak established during the year was 13.2 per cent.

Sixty-three municipalities were served, fifty-nine being partners securing power on a cost basis and four system customers. With few exceptions load increases occurred in these municipalities.

The total average load taken by urban municipalities increased by 6.3 per cent over the previous year. The total average load sold in rural power districts increased by approximately 20 per cent over 1938 and load increases were recorded in practically all of these rural power districts.

General engineering advice and assistance was given to all urban municipalities on the Georgian Bay system in connection with the operation of local distribution systems.

EASTERN ONTARIO SYSTEM

The power sold on the Eastern Ontario system continued its normal increase during the year 1939 and with few exceptions the load in all rural power districts and urban municipalities increased. The total amount of power delivered to urban municipalities and rural power districts amounted to 108,242 horsepower in 1939, an increase of 7.2 per cent over the 1938 load of 101,000 horsepower.

The Eastern Ontario system is now taking all the power available from the Commission's generating stations on the Eastern Ontario system, and is also taking all the 60-cycle power provided under the Commission's contract with the Gatineau Power Company. For immediate future requirements, this system can obtain a supply of power from the Niagara system through the frequency changer at Chats Falls.

General engineering assistance was given to nearly all municipalities on the Eastern Ontario system in connection with the operation and management of their local Hydro utilities. Certain municipalities received special engineering advice and assistance with regard to matters detailed below:

Arnprior—The ratepayers on November 24, 1938, voted in favour of purchasing the local distribution system and entering into a cost contract for a supply of power, to commence on January 1, 1939.

Belleville—Detailed plans have been prepared for installing high frequency control of flat-rate water heaters throughout the city.

Marmora—The distribution system was changed from 2,300 volts to 4,000 volts.

Millbrook—On December 1, 1938, the municipality, following a municipal vote, purchased its distribution system from the Commission and is now operating under a cost contract.

Orono—This police village purchased its distribution system from the Commission on November 1, 1938, following a favourable vote, and is now operating under a cost contract.

Picton—Poles and wires were removed from the business section of the main street and modern street lighting installed.

Prescott—Plans and specifications were prepared for the installation of a new street-lighting system operated by relays. The voltage of the distribution system is being changed from 2,300 to 4,000 volts.

Stirling—Increased transformer capacity was installed in the municipal station.

Whitby—All poles and overhead wires were removed from the business section of the town and a new underground street-lighting system was installed.

THUNDER BAY SYSTEM

The Thunder Bay system comprises the cities of Port Arthur and Fort William, the rural districts lying east and west of these cities and the township of Nipigon. It also serves the mining area from lake Nipigon eastward to Little Long Lac. Approximately one-half of all the power supplied on this system is utilized by pulp and paper mills; about one-eighth is utilized for operating terminal grain elevators; about one-eighth for the mining industry; and about one-quarter by urban and rural consumers. In consequence of these conditions wide variations in system demands occur from year to year, depending upon crop conditions, and the stability of the pulp and paper market.

There was a net increase of about two per cent in the total average load sold on the Thunder Bay system during 1939. The municipal load sold increased by 7.3 per cent, and the rural load by 34 per cent. The power supplied to the mining industry was 26 per cent greater, and the load taken by the pulp and paper industry remained at about the same level.

Engineering assistance and advice relating to the operation of the local distribution systems was given to the cities of Fort William and Port Arthur, also to Nipigon township.

NON-SYSTEM PROPERTIES

Rural Power Districts in Northern Ontario

During 1939 the Provincial Government, by special legislation, extended to the rural power districts of northern Ontario the 50 per cent grant-in-aid which applies to the capital cost of primary and secondary distribution lines and equipment in the rural power districts of the co-operative systems in southern Ontario. This enabled arrangements to be made for supplying Hydro service to many rural districts throughout northern Ontario. Public meetings were held, information was submitted, and contracts were entered into in several areas. Four large rural power districts, each comprising several organized as well as unorganized townships, were formed and it is expected that during 1940 several distribution systems will be constructed and placed in operation.

To provide for the rapidly expanding load in the Sudbury rural power district a new rural office, with a complete staff and equipment for handling rural service exclusively, was established at Sudbury. Information was supplied to several new rural areas adjacent to the city and a considerable expansion in rural service is anticipated.

NORTHERN ONTARIO PROPERTIES

The Northern Ontario Properties held and operated by the Commission on behalf of the Province serve chiefly mines and mining communities in various areas of the Province north of lakes Huron and Superior between the Manitoba and Quebec interprovincial boundaries, excluding the area served by the Thunder Bay system. At the close of the year power was supplied to 38 mining properties, 2 cities, 4 towns, 9 villages, hamlets and mining townsites, and 3 rural power districts.

As in previous years, there was great expansion in load growth in Northern Ontario Properties during 1939. The total average load sold was approximately 31,000 horsepower greater than for the previous year, representing an increase of 24 per cent.

Nipissing District

The city of North Bay, the town of Powassan and the village of Callander comprise the Nipissing district. Power is supplied from three hydro-electric generating plants on the South river with a transmission tie line connection to the Crystal Falls development on the Sturgeon river. There was an increase of approximately 4 per cent in the total load sold. During the year negotiations were conducted with the council of the city of North Bay regarding the sale of the local distribution system to the corporation.

Sudbury District

This district serves the city of Sudbury and adjacent areas. Power is supplied to the city of Sudbury and the town of Capreol at a fixed rate, also to the Sudbury rural power district and for mining and milling operations to the Falconbridge and International Nickel mines. The utilization of power is divided approximately one-half for municipal and rural, and one-half for mining purposes. The Sudbury city peak load recorded an increase of 12 per cent, and the Falconbridge Nickel mine increased its 60-cycle peak load by 34 per cent. The total average load sold in the district was approximately 13.4 per cent greater than in 1938.

Engineering advice and assistance was given to the local commissions of the city of Sudbury and the town of Capreol with respect to the operation of their local distribution systems.

Abitibi District

The Abitibi district comprises the area served by the Abitibi Canyon development and connecting transmission lines. Power is supplied to the mining districts of Sudbury, Matachewan, Porcupine, Ramore, Kirkland

Lake and Larder Lake. The rapid expansion in load growth continued throughout 1939 with 28 mines served at the close of the year. The total annual average load sold in the district increased by 26 per cent over 1938.

The various mining properties under contract with the Commission, as well as many prospective properties, also mining properties in the development stage were visited periodically during the year for the purpose of rendering assistance and giving information with respect to power supply problems.

To provide for power supply to the Denison Nickel mine, which is situated in the Abitibi district, power is purchased from the Abitibi Power & Paper Company's hydro-electric development at Espanola and transmitted to the mine. No changes occurred in this service during the year.

Service is given in the Abitibi district to four mining townsites at Kearns, King Kirkland, Matachewan and Hislop, also to the town of Matheson and the village of Ramore. The Kearns mining townsite was added during the year and service given to 104 new customers. In all these areas increases were recorded, both in the average load sold and in new consumers served.

Patricia-St. Joseph District

During the year the Patricia district, served from Ear Falls generating station, and the St. Joseph district, served from Rat Rapids generating station, were connected by tie transmission lines. The generating and transmission facilities are now operated in parallel as a co-ordinated system, and the two districts will in future be known as the Patricia-St. Joseph district.

The former Patricia district served the Red Lake and Woman Lake mining areas and the St. Joseph district served the Pickle Lake mining area. In the Patricia district power was supplied to seven mining properties, also to the mining townsite of Red Lake, the hamlet of Hudson and the town of Sioux Lookout. The average load sold increased during the year by approximately 40 per cent.

Service was given for the first time to the town of Sioux Lookout and the hamlet of Hudson; a distribution system being constructed in the latter place and placed in operation during the month of October. The Hudson distribution system, together with that at the Red Lake mining townsite, is operated by the Commission; the distribution system at Sioux Lookout is operated by a local commission.

In the St. Joseph district two mining properties are served, the Central Patricia and Pickle Crow companies. The total average load sold in this district increased six per cent.

All mining properties under contract with the Commission, together with mines in the prospective and development stages, were visited on various occasions for the purpose of rendering advice and engineering assistance in connection with power supply problems. Investigations and studies were made concerning service to the Central Patricia townsite, now partially served by the Central Patricia mine, with a view to supplying more complete service in this area.

RURAL ELECTRICAL SERVICE

IN ONTARIO

AGRICULTURE, including stock-raising and horticulture, is the chief single industry of the Canadian people, employing over one-third of the gainfully-occupied males. In addition, it provides the raw material for many Canadian manufactures, and its products in raw and manufactured form constitute a very large percentage of Canadian exports. The Province of Ontario, while highly industrialized within its urban centres, also occupies a very prominent position in the agricultural development of Canada. As an example—the current value of farm capital in Ontario (including lands and buildings, implements and machinery, live stock) is approximately 29 per cent of the corresponding figure for the whole of Canada.

The land area of the Province of Ontario extends over a vast area of 363,282 square miles, of which 35,689 square miles are occupied for agriculture. The total rural population in the area served by The Hydro-Electric Power Commission of Ontario, or in adjacent areas within transmission distance of the Commission's power supply is approximately 1,100,000.

During the past year the mileage of rural line extensions approved for construction in rural power districts in Ontario was 2,364. In all, 13,235 consumers were added. The aggregate load supplied to all rural Hydro consumers in the Province amounted to 61,634 horsepower, an increase of 15.5 per cent over 1938.

Census data indicate that there are approximately 200,000 farms in Ontario, varying from one acre to six hundred acres or larger. It would be erroneous, however, to conclude that hydro-electric service will eventually extend to such a number of farms. Approximately ten per cent of these are very small, and service to them, if available, is supplied by the Commission under rates applicable to non-farm classes. There are also large numbers of farms jointly owned and tenanted, some having no residential buildings on them, and there are also a large number situated in remote districts out of reach of Hydro lines and stations.

During the period that the regulations respecting service to rural consumers required a minimum of three farm contracts per mile of primary line the Commission made surveys in various parts of the Province and estimated that approximately 75,000 standard or large farms would comprise the probable ultimate total of farms that could be served on this basis. Since that time new regulations have been made permitting service on the basis of two farms per mile, which necessarily has increased the number of additional farms that may be served.

For the next year it is anticipated that the miles of primary line constructed will approximate the number constructed during the past few years. As the lines extend into the more remote districts, however, the average number of farms that can be served per mile of line and the number of farms remaining to be served will become smaller, and therefore the mileage of rural lines constructed each year will decrease.

There are 184 operating rural power districts, and power is delivered to approximately 113,000 rural consumers, comprising farms and dwellings in various groups. The consumers are situated in 419 townships and 111 police villages, and are served over a network of rural primary lines which aggregate 18,166 miles. In addition to the 419 townships served by rural power districts, 10 townships are served jointly by rural power districts and voted areas.

Recent estimates of the major electrical appliances used in rural power districts are set out in the following table:

ELECTRICAL APPLIANCES IN USE IN RURAL POWER DISTRICTS

Data for all systems for the year 1938

On the farm			In the farm home		
Item	Number of appliances	Percentage of saturation	Item	Number of appliances	Percentage of saturation
Motor	7,650	16.7	Range	7,899	17.2
Pump	6,125	13.3	Hot plate	9,977	21.7
Grain grinder	2,488	5.4	Washer	26,241	57.2
Milking machine	1,317	2.9	Vacuum cleaner	6,175	13.5
Milk cooler	800	1.7	Water heater, flat rate	1,821	4.0
Cream separator	3,070	6.7	Water heater, metered	913	2.0
Churn	496	1.1	Grate	344	.7
Incubator	537	1.2	Portable air heater	4,153	9.1
Brooder	469	1.0	Ironer	506	1.1
Hot bed	35	.1	Hand iron	35,141	76.6
Water heater, flat rate	84	.2	Refrigerator	5,428	11.8
Water heater, metered	47	.1	Toaster	23,543	51.4
Miscellaneous	467	1.0	Radio	32,224	70.3
			Furnace blower	742	1.6
			Pump	6,977	15.2
			Miscellaneous	1,518	3.3

The following table is also of interest when a comparison is made between rural and urban use:

ELECTRICAL APPLIANCES IN USE IN HOMES OF URBAN AND RURAL CONSUMERS—1938

Electrical appliance	R.P.D. hamlet		R.P.D. farm		Urban	
	No. of appliances	Percentage of saturation	No. of appliances	Percentage of saturation	No. of appliances	Percentage of saturation
Range	5,944	12.5	7,899	17.2	149,390	29.6
Hot plate	11,095	23.4	9,977	21.7	91,556	18.1
Washer	21,337	44.9	26,241	57.2	258,792	51.2
Vacuum cleaner	6,393	13.4	6,175	13.5	169,880	33.6
Water heater, flat rate	1,561	3.3	1,821	4.0	53,355	10.6
Water heater, metered	956	2.0	913	2.0	48,761	9.7
Grate	400	0.8	344	0.7	36,985	7.3
Air heater	3,594	7.6	4,153	9.1	156,841	31.1
Ironer	593	1.2	506	1.1	13,329	2.6
Iron	34,230	72.1	35,141	76.6	504,257	99.8
Refrigerator	5,723	12.1	5,428	11.8	94,376	18.7
Toaster	23,639	49.7	23,543	51.4	313,873	62.1
Radio	32,677	68.8	32,224	70.3	402,837	79.7
Furnace blower	822	1.7	742	1.6	26,482	5.2
Grill	....	....	....	....	49,582	9.8
Pump	5,423	11.4	6,977	15.2	....	....
Air conditioner	....	....	....	....	3,322	0.7
Miscellaneous	1,927	4.1	1,518	3.3	....	....

RURAL ELECTRICAL SERVICE IN ONTARIO
An electrical incubator on an Ontario farm. Egg capacity 5,800

Standard Number of Consumers per Mile

Effective May 1, 1938, the Commission received authority by Order-in-Council to construct rural primary lines on a basis of two farms per mile under existing rates. This new basis does not include service to summer cottages, which remains on the previous basis of three farms per mile. The standard number of consumers required per mile varies according to the class of service rendered. For this purpose a unit rating is allocated to each class of consumer. A total of ten units per mile made up by various classes of consumers is required before construction work is undertaken.

The following table indicates the number of units for each class of service:

Class of consumer	Service	Units per class applicable to number per mile—May 1, 1938			
		A—Regular rural consumers		B—Summer cottage consumers	
		Units per contract	Contracts per mile	Units per contract	Contracts per mile
1B	Hamlet lighting	2.25	4.4	1.50	6.7
1C	Hamlet lighting (range)	3.75	2.7	2.50	4.0
2A	House lighting	1.90	5.3	1.25	8.0
2B	Small farm service (50 acres or less)	3.50	2.9	2.35	4.3
3	Light farm service (over 50 acres)	5.00	2.0	3.35	3.0
4	Medium farm service (single-phase)	5.00	2.0	3.35	3.0
5	Medium farm service (three-phase)	5.00	2.0	3.35	3.0
6A	Heavy farm service (single-phase)	5.00	2.0	3.35	3.0
6B	Heavy farm service (three-phase)	5.00	2.0	3.35	3.0
7A	Special farm service (single-phase)	5.00	2.0	3.35	3.0
7B	Special farm service (three-phase)	5.00	2.0	3.35	3.0

Maximum Consumption Charge

The Commission has found that the maximum economic limit of the first domestic use throughout the rural power districts of the Province is 6 cents per kilowatt-hour. In all rural power districts, the first consumption rate is fixed at a maximum of 6 cents per kilowatt-hour. The second rate has a maximum of 2 cents per kilowatt-hour which applies to all districts.

Low Third Consumption Rate for Long-Hour Users

In 1934 the Commission made available for rural consumers a special energy rate for long-hour users of power. This low rate particularly affects under-earth heating (hot-beds) and heating of water. Where the extra use of energy may be obtained from the present equipment, a third follow-up rate per kilowatt-hour of 0.75 cents gross is given in all districts. The first rate remains unchanged, except that as pointed out above it is subject to a maximum of 6 cents per kilowatt-hour, and the kilowatt-hours to be charged at the first rate remain unchanged. The number of kilowatt-hours to be charged at the second rate varies both with the class of service and the first kilowatt-hour rate. At the head of the table of rural rates at

RURAL ELECTRICAL SERVICE IN ONTARIO
Modern chopper and milker installed in barn on Ontario farm

the end of this section is a schedule which shows the class of service, the number of kilowatt-hours per month to be charged for at the first rate, and the number of kilowatt-hours at the second rate according to the governing first rate.

Average Cost to Rural Consumers Decreasing

The remarkable benefits obtained by rural communities in regard to the amount charged to them during the period 1928 to 1938 is indicated in the following tables:

HAMLET AND HOUSE LIGHTING SERVICE
Classes 1B, 1C and 2A

Year	Annual revenue	Kilowatt-hours consumed	Number of consumers billed*	Average revenue per kw-hr.	Average monthly bill	Average monthly consumption, kw-hr.
1928	$ 530,407.00	10,702,031	17,585	4.95c	$2.51	50.7
1929	663,311.00	14,424,770	21,219	4.60	2.85	62.0
1930	757,558.00	17,815,987	25,013	4.25	2.73	64.2
1931	974,224.17	22,127,474	31,176	4.40	2.88	65.6
1932	1,075,081.03	24,654,386	33,638	4.36	2.76	63.3
1933	1,133,368.70	25,410,470	35,941	4.46	2.70	60.1
1934	1,149,876.67	27,768,460	37,466	4.14	2.61	63.0
1935	1,171,873.28	30,802,290	39,751	3.80	2.53	66.5
1936	1,239,010.83	35,666,241	43,014	3.47	2.49	71.8
1937	1,331,919.46	40,935,040	46,785	3.25	2.47	76.0
1938	1,439,681.39	47,612,820	52,514	3.02	2.42	79.9

*See next page.

FARM SERVICE

Classes 2B, 3, 4, 5, 6A, 6B, 7A and 7B

Year	Annual revenue	Kilowatt-hours consumed	Number of consumers billed*	Average revenue per kw-hr.	Average monthly bill	Average monthly consumption, kw-hr.
1928	$ 569,007.00	10,969,828	9,309	5.18c	$4.97	96.1
1929	777,736.00	16,022,842	12,605	4.85	5.85	120.8
1930	863,805.00	20,507,063	16,011	4.21	5.03	119.4
1931	1,128,554.28	25,716,141	20,796	4.39	5.11	116.4
1932	1,255,482.13	28,675,400	22,432	4.38	4.84	110.5
1933	1,309,122.96	30,062,194	23,283	4.35	4.75	109.2
1934	1,319,922.69	33,312,314	23,882	3.96	4.66	117.7
1935	1,343,222.39	37,667,453	25,357	3.57	4.55	127.5
1936	1,385,784.39	45,447,669	28,198	3.05	4.31	141.4
1937	1,366,484.50	54,858,240	35,508	2.49	3.57	143.5
1938	1,711,788.81	67,886,882	44,564	2.52	3.56	141.3

*It may be observed that the number of consumers reported here does not agree with those shown in other sections of the Annual Report of the Commission. This is due to the fact that the figures given here represent consumers actually billed, whereas elsewhere in the Report the tables show the number of contracts executed to the end of the fiscal year. In many cases service is not given until the following year.

Rural Loans

Under *The Rural Power District Loans Act, 1930*, authority was given to The Hydro-Electric Power Commission of Ontario to finance the installation of wiring and the purchase of specified electrical equipment by rural farm consumers.

To October 31, 1939, 2,093 applications have been received and of these 1,525 loans have been completed. As all applications for loans are governed by regulations made subject to the provisions of the Act it will be seen from the above that quite a number fail to meet the requirements of these regulations.

To October 31, 1939, 595 loans had been repaid in full either through the maturing of the loan or because of the improved financial position of the borrower.

During the fiscal year ending October 31, 1939, there were received 356 applications which with the 41 carried over from the previous year were disposed of as follows:—

Loans completed	296
Withdrawn	10
Did not meet requirements	31
Cheques issued but refused by applicants and cancelled	2
Not approved	10
Approved waiting final papers	26
In process	22
Total	397

SUMMARY OF LOANS MADE TO OCTOBER 31, 1939

Fiscal year ended Oct. 31	Applications received	Loans consummated	Amount of loans
			$
1931	126	74	23,542
1932	226	187	40,160
1933	144	111	20,975
1934	107	81	14,855
1935	235	169	32,450
1936	307	212	40,550
1937	230	155	29,615
1938	321	240	47,265
1939	356	296	61,445
Total	2,052	1,525	310,857

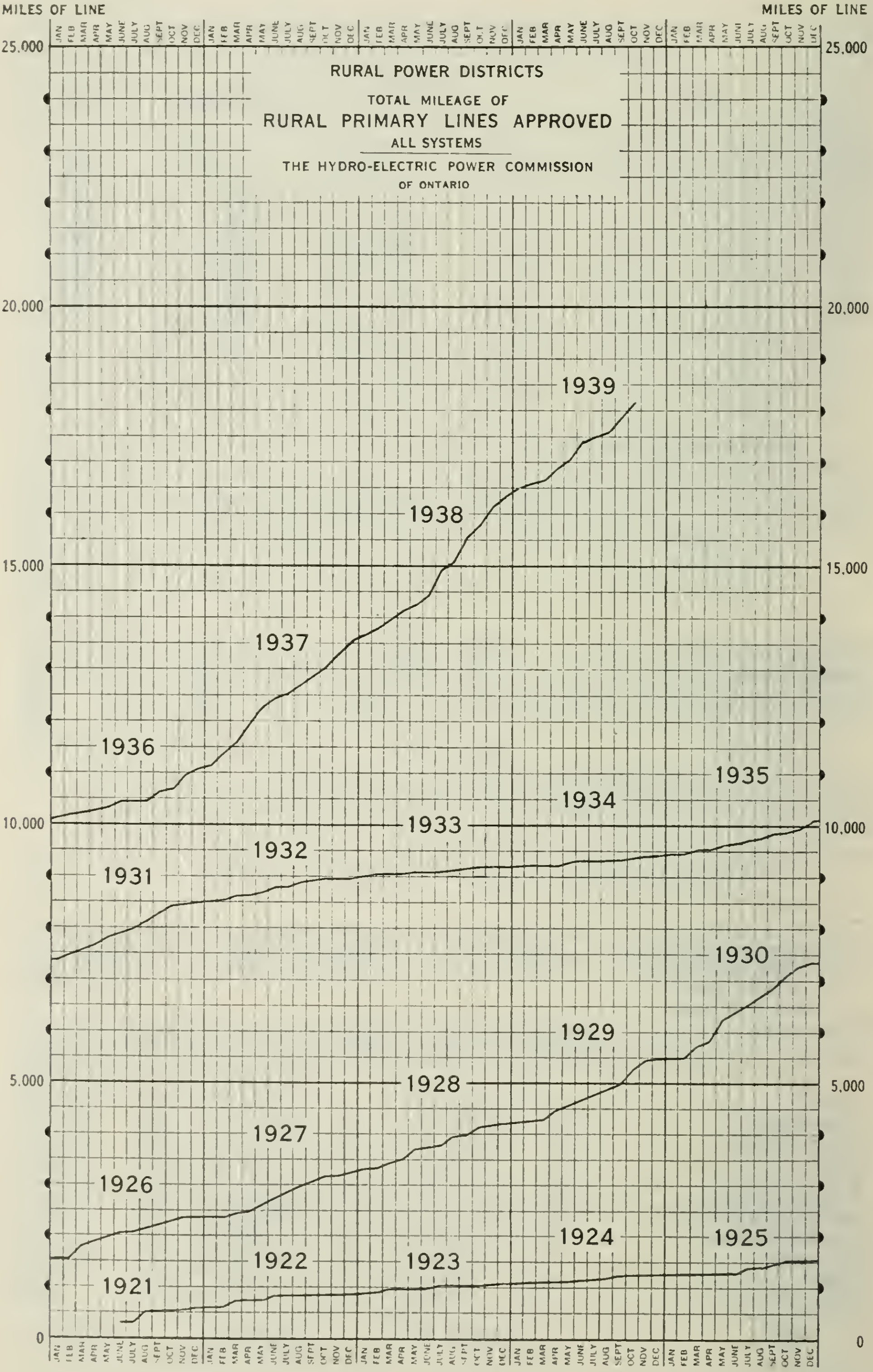
LOANS GRANTED TO CONSUMERS IN RURAL POWER DISTRICTS

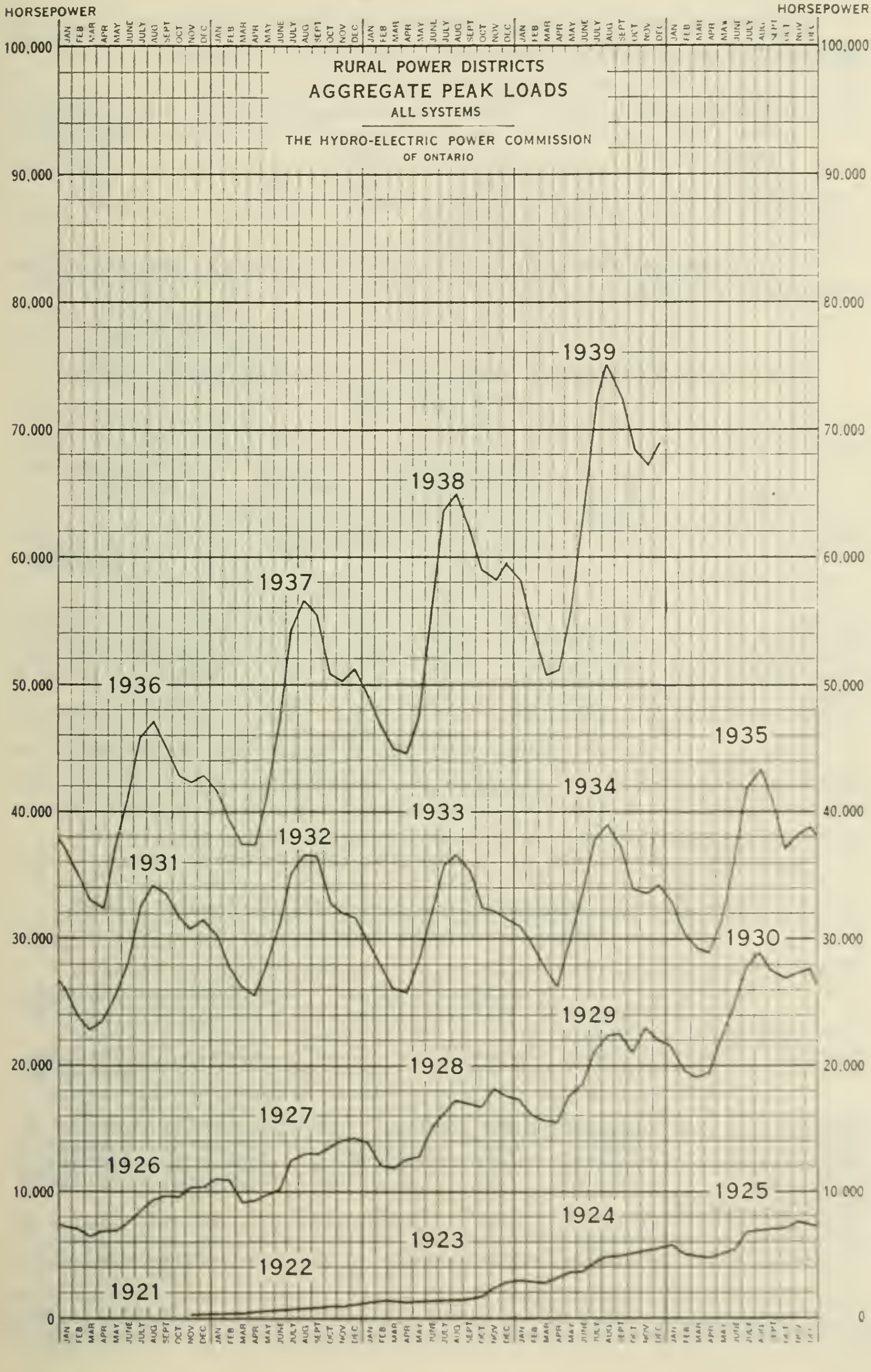
System	Total to Oct. 31, 1938		Nov. 1, 1938, to Oct. 31, 1939		Total to Oct. 31, 1939	
	No.	Amount	No.	Amount	No.	Amount
		$		$		$
Niagara	1,023	199,075	223	44,855	1,246	243,930
Georgian Bay	147	36,657	55	12,540	202	49,197
Eastern Ontario	53	12,285	15	3,385	68	15,670
Thunder Bay	1	335	2	435	3	770
Manitoulin R.P.D.	5	1,060	1	230	6	1,290
All systems	1,229	249,412	296	61,445	1,525	310,857

Average loan for 1938, $196.94; for 1939, $207.58. Average for all loans, $203.84.

DETAILS OF RURAL LOANS GRANTED TO OCTOBER 31, 1939

Items applied for (including installation) in loans which have been made	Totals for 1,229 loans made to Oct. 31, 1938		Totals for 296 loans made during year to October 31, 1939		Totals for 1,525 loans made to October 31, 1939	
	Number affected	Cost to consumers	Number affected	Cost to consumers	Number affected	Cost to consumers
		$ c.		$ c.		$ c.
Service	434	22,918.36	89	5,064.73	523	27,983.09
House wiring	434	37,014.51	92	6,937.11	526	43,951.62
Building wiring	412	31,045.63	84	6,577.41	496	37,623.04
Motors	50	5,171.96	3	156.00	53	5,327.96
Grain grinders	667	131,789.97	145	32,805.00	812	164,594.97
Pumping systems	103	14,521.05	26	4,384.21	129	18,905.26
Milking machines	23	6,393.15	10	3,250.00	33	9,643.15
Washing machines	40	4,106.95	6	598.90	46	4,705.85
Milk coolers	56	12,335.78	25	5,746.39	81	18,082.17
Ranges	1	165.00	1	160.00	2	325.00
Cream seperators	1	80.00	1	100.00	2	180.00
Totals	....	265,542.36	....	65,779.75	....	331,322.11


MILES OF LINE
MILES OF LINE
RURAL POWER DISTRICTS
TOTAL MILEAGE OF
RURAL PRIMARY LINES APPROVED
ALL SYSTEMS
THE HYDRO-ELECTRIC POWER COMMISSION
OF ONTARIO
25,000
20,000
15,000
10,000
5,000
0
JAN FEB MAR APR MAY JUNE JULY AUG SEPT OCT NOV DEC
1921
1922
1923
1924
1925
1926
1927
1928
1929
1930
1931
1932
1933
1934
1935
1936
1937
1938
1939


HORSEPOWER
HORSEPOWER
RURAL POWER DISTRICTS
AGGREGATE PEAK LOADS
ALL SYSTEMS
THE HYDRO-ELECTRIC POWER COMMISSION
OF ONTARIO
100,000
90,000
80,000
70,000
60,000
50,000
40,000
30,000
20,000
10,000
0
JAN FEB MAR APR MAY JUNE JULY AUG SEPT OCT NOV DEC
1939
1938
1937
1936
1935
1934
1933
1932
1931
1930
1929
1928
1927
1926
1925
1924
1923
1922
1921

Respecting the 1,525 loans made to October 31, 1939, the following table shows the number of loans made for each term of years:

One year term	26	Six year term	10
Two " "	73	Seven " "	79
Three " "	287	Eight " "	9
Four " "	83	Nine " "	0
Five " "	920	Ten " "	38

During the past four years there have been no loans made for periods longer than five years.

RURAL LINE EXTENSIONS APPROVED BY THE COMMISSION DURING THE YEAR 1939

System	Miles of primary line	Net increase in number of consumers			Power supplied in October, 1939	Capital approved for extensions	
		Hamlet	Farm, etc.	Total		Total	Provincial grant-in-aid
					h. p.	$ c.	$ c.
Niagara	936.86	1,779	4,084	5,863	50,005	2,380,526.00	1,190,263.00
Georgian Bay	536.99	1,063	1,502	2,565	6,078	1,105,143.00	547,203.00
Eastern Ontario	765.24	1,386	2,193	3,579	11,170	1,598,200.00	799,100.00
Thunder Bay	90.89	53	224	277	391	186,816.00	93,408.00
Northern Ontario R.P. districts	34.26	887	64	951	789	115,183.00	57,591.50
Totals	2,364.24	5,168	8,067	13,235	68,433	5,385,868.00	2,687,565.50

SUMMARY OF RURAL LINE EXTENSIONS

As Approved by the Commission from June 1, 1921, to October 31, 1939, Constructed or Under Construction

System	Miles of primary line	Number of consumers			Capital approved for extensions	
		Hamlet	Farm, etc.	Total	Total	Provincial grant-in-aid
					$ c.	$ c.
Niagara	10,964.47	30,092	41,308	71,400	25,663,772.89	12,808,606.44
Georgian Bay	2,689.81	9,060	6,757	15,817	5,762,897.95	2,809,729.49
Eastern Ontario	4,141.84	11,389	11,755	23,144	9,240,932.31	4,620,466.15
Thunder Bay	217.12	326	565	891	443,057.00	221,528.50
Northern Ontario R.P. districts	153.26	1,658	247	1,905	411,305.00	205,652.50
Totals	*18,166.50	52,525	60,632	113,157	41,521,965.15	20,665,983.08

*This total includes 460.25 miles of primary line under construction on October 31, 1939, and service to 1,626 new consumers was not completed until after the end of the fiscal year.

CLASSIFICATION OF SERVICES FOR RURAL POWER DISTRICTS

When contracts between the consumer and the township have been executed, users of power in townships are supplied with electric service under general classes, according to the requirements and conditions of the individual consumer, as follows:

Class	Service	Class demand kilowatts	Phase	Volts	Fuse rating amperes (maximum)
1B	Hamlet Lighting	1.32	1	110	20
1C	" "	2	1	220–110	35
2A	House Lighting	1.32	1	110	20
2B	Small Farm Service	2	1	220–110	35
3	**Light Farm Service**	**3**	**1**	**220–110**	**35**
4	Medium Farm Service	5	1	220–110	50
5	" " "	5	3	220–110	35
6A	Heavy Farm Service	9	1	220–110	100
6B	" " "	9	1 and 3	220–110	60
7A	Special Farm Service	15	1	220–110	According to load
7B	" " "	15	1 and 3	220–110	According to load

Class 1: Hamlet Service—Includes service to consumers (other than farm and power users) in hamlets, where four or more consumers are served from one transformer. Service is given under two sub-classes as follows:

> **Class 1-B:** Service to residences or stores, including use of portable appliances, and permanently installed appliances not exceeding 1,320 watts.
>
> **Class 1-C:** Service to residences or stores with electric range or ordinary permanently installed appliances greater than 1,320 watts. Where a combination of residence and store can be supplied from one service, the combination is billed as a single Class 1-C consumer. Special or unusual loads will be treated specially.

Class 2-A: House Lighting—Includes service to all consumers other than farm and power users that cannot be grouped as in Class 1.

Class 2-B: Farm Service, Small—Includes service for lighting of farm buildings, power for miscellaneous small equipment and power for single-phase motors not exceeding 2 horsepower and electric range if motors and range are not used simultaneously, on a farm of fifty acres or less.

Class 3: Farm Service, Light—Includes service for lighting of farm buildings, power for miscellaneous small equipment and power for single-phase motors not exceeding 3 horsepower and electric range if motors and range are not used simultaneously.

Class 4: Farm Service, Medium Single-Phase—Includes service for lighting of farm buildings, power for miscellaneous small equipment, and power for single-phase motors up to 5-horsepower demand and electric range if motors and range are not used simultaneously.

Class 5: Farm Service, Medium 3-Phase—Includes service for lighting of farm buildings, power for miscellaneous small equipment and power for 3-phase motors up to 5-horsepower demand and electric range if motors and range are not used simultaneously.

Class 6: Farm Service, Heavy—Includes service for lighting of farm buildings, power for miscellaneous small equipment and power for motors up to 5-horsepower demand and an electric range, or 10-horsepower demand without an electric range. Single- or three-phase service will be given at the discretion of The Hydro-Electric Power Commission of Ontario.

Class 7: Farm Service, Special—Includes service for lighting of farm buildings, power for miscellaneous small equipment, power for 3-phase motors from 10- to 20-horsepower demand and electric range. Single- or three-phase service will be given at the discretion of The Hydro-Electric Power Commission of Ontario.

Note: Classes 2B to 7B are designed primarily to cover the service requirements of farmers. Consumers other than farmers who require a more comprehensive service with greater demand than is provided for in classes 1B, 1C and 2A may obtain this service upon payment of the specified service charge listed in the table of rates.

Note: Class 2B is the service usually supplied to farms of fifty acres or less and Class 3 is the service usually supplied to larger farms. More than 90 per cent of new contracts for farm service are in one or other of these classes.

RURAL POWER DISTRICTS—MILES OF LINE, NUMBER OF CONSUMERS AND RATES—OCTOBER 31, 1939

Rural power district	Property number	Miles of line	No. of consumers	Rural rates: Class 1B	1C	2A	2B	3*	4	5	6A	6B	7A	7B	Gross consumption charges per kilowatt-hour: First energy rate	Second energy rate	Rate for all additional	Prompt payment discount on gross bill
Monthly consumption charged for at first energy rate: No. of kw-hrs. per month				30	30	30	30	**42**	70	70	126	126	210	210				
Monthly consumption charged for at second energy rate: No. of kw-hrs. where first energy rate is less than 3 cts.				120	270	120	270	**258**	430	430	774	774	1290	1290				
3 cts.				105	240	105	240	**228**	380	380	684	684	1140	1140				
3.1 to 4 cts.				75	180	75	180	**168**	280	280	504	504	840	840				
4.1 to 5 cts.				60	150	60	150	**138**	230	230	414	414	690	690				
more than 5 cts.				45	120	45	120	**108**	180	180	324	324	540	540				
Maximum gross monthly service charge to Summer cottages. Where the rates are below these standards, they are indicated in each instance by †.				$ c. 1.11	$ c. 1.56	$ c. 1.11	$ c. 1.56	$ c. **1.56**	$ c. 1.56	$ c. 2.50	$ c. 2.78	$ c. 2.78	$ c. 3.33	$ c. 3.33				
Gross monthly service charge to regular consumers																		
NIAGARA SYSTEM																		
				$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	cents	cents	cents	%
Acton	N5 D1	15.50	49	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	5	2	0.75	10
Ailsa Craig	N4 D7	68.66	179	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	6	2	0.75	10
Alvinston	N18 D9	51.55	128	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	6	2	0.75	10
Amherstburg	N15 D3	100.34	861	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	3.5	2	0.75	10
Aylmer	N11 D2	268.27	1,543	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	4.5	2	0.75	10
Ayr	N12 D4	38.75	140	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	4	2	0.75	10
Baden	N7 D1	134.68	672	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	3	1.5	0.75	10
Beamsville	N44 D3	230.44	1,991	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	3	1.5	0.75	10
Belle River	N15 D2	62.35	578	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	4	2	0.75	10
Blenheim	N14 D3	100.18	591	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	4	2	0.75	10
Bond Lake	N3 D3	211.31	2,192	1.10	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	3	1.5	0.75	10
				†1.10	1.56	1.11	1.56	**1.56**	1.56	2.50	2.78	2.78	3.33	3.33				
Bothwell	N14 D10	120.88	396	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	5	2	0.75	10
Brampton	N13 D2	88.07	307	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	4	2	0.75	10
Brant	N12 D1	199.04	1,085	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	3	1.5	0.75	10
Brigden	N18 D8	97.50	290	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	6	2	0.75	10
Burford	N12 D2	102.98	495	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	4.5	2	0.75	10
Caledonia	N2 D5	187.00	1,013	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	4.	2	0.75	10
Chatham	N14 D1	229.77	1,367	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	3.5	2	0.75	10
Chippawa	N1 D7	38.81	263	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	3.5	2	0.75	10
Clinton	N8 D11	107.79	564	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	5	2	0.75	10

Delaware	N4	D3	194.16	938	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	4	2	0.75	10
Dorchester	N4	D1	148.90	816	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	4	2	0.75	10
Dresden	N14	D12	106.67	361	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	6	2	0.75	10
Drumbo	N12	D5	97.74	457	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	4	2	0.75	10
Dundas	N2	D1	168.24	1,105	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	3	1.25	0.75	10
Dunnville	N1	D9	92.20	470	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	5	2	0.75	10
Dutton	N11	D3	107.70	353	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	6	2	0.75	10
Elmira	N7	D3	38.70	141	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	4	2	0.75	10
Elora	N5	D4	98.20	419	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	4	2	0.75	10
Essex	N15	D7	157.12	793	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	4.5	2	0.75	10
Exeter	N4	D6	135.46	989	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	5	2	0.75	10
Forest	N18	D6	117.64	497	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	6	2	0.75	10
Galt	N6	D2	53.05	473	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	3	1.5	0.75	10
Georgetown	N5	D2	89.78	401	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	4	2	0.75	10
Goderich	N8	D2	70.15	281	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	5	2	0.75	10
Grantham	N44	D1	67.42	950	1.00	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	3	1.5	0.75	10
					†1.00	1.50	1.11	1.56	**1.56**	1.56	2.50	2.78	2.78	3.33	3.33				
Guelph	N5	D3	163.67	890	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	3	1.5	0.75	10
Haldimand	N2	D8	198.91	881	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	4.5	2	0.75	10
Harriston	N8	D5	32.49	91	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	5	2	0.75	10
Harrow	N15	D4	82.74	880	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	4.5	2	0.75	10
Ingersoll	N10	D3	229.44	863	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	5.5	2	0.75	10
Jordan	N44	D2	48.62	495	1.06	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	3	1.5	0.75	10
					†1.06	1.56	1.11	1.56	**1.56**	1.56	2.50	2.78	2.78	3.33	3.33				
Keswick	N3	D5	79.52	1,431	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	4	2	0.75	10
Kingsville	N15	D5	180.02	1,974	1.00	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	3	2	0.75	10
					†1.00	1.56	1.11	1.56	**1.56**	1.56	2.50	2.78	2.78	3.33	3.33				
Listowel	N8	D8	113.80	483	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	4	2	0.75	10
London	N1	D2	235.00	2,891	0.90	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	3	1.5	0.75	10
					†0.90	1.56	1.11	1.56	**1.56**	1.56	2.50	2.78	2.78	3.33	3.33				
Lucan	N4	D5	90.88	282	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	6	2	0.75	10
Lynden	N2	D2	82.72	372	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	4	2	0.75	10
Markham	N3	D1	170.42	1,423	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	4	2	0.75	10
Merlin	N14	D15	132.80	548	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	5	2	0.75	10

*See footnote on page 51.

†Summer cottage rates.

RURAL POWER DISTRICTS—MILES OF LINE, NUMBER OF CONSUMERS AND RATES—OCTOBER 31, 1939—Continued

Rural power district	Rural rates																	
	Class			1B	1C	2A	2B	3*	4	5	6A	6B	7A	7B	Gross consumption charges			Prompt payment discount
	Property number	Miles of line	No. of consumers	Gross monthly service charge to regular consumers											First energy rate‡	Second energy rate‡	Rate for all additional	
				$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	cents	cents	cents	%
NIAGARA SYSTEM—Continued																		
Milton	N13 D3	99.80	497	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	4	2	0.75	10
Milverton	N8 D9	69.79	270	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	4	2	0.75	10
Mitchell	N8 D7	104.47	504	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	4.5	2	0.75	10
Newmarket	N3 D4	100.47	632	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	4	2	0.75	10
Niagara	N1 D1	63.00	466	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	3	1.5	0.75	10
Norwich	N10 D1	165.13	825	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	3.5	2	0.75	10
Oil Springs	N18 D3	78.56	265	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	6	2	0.75	10
Palmerston	N8 D6	80.07	233	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	4	2	0.75	10
Petrolia	N18 D5	46.28	183	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	6	2	0.75	10
Preston	N6 D1	183.80	1,475	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	3	1.25	0.75	10
Ridgetown	N14 D2	128.41	892	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	4	2	0.75	10
St. Jacobs	N7 D2	99.62	504	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	3	1.5	0.75	10
St. Marys	N9 D1	200.88	768	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	5	2	0.75	10
St. Thomas	N11 D1	228.66	1,572	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	3	1.5	0.75	10
Saltfleet	N17 D1	104.10	2,119	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	3	1.5	0.75	10
Sandwich	N15 D1	152.95	2,653	1.00	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	3.5	1.5	0.75	10
				†1.00	1.56	1.11	1.56	**1.56**	1.56	2.50	2.78	2.78	3.33	3.33				
Sarnia	N18 D4	116.97	1,787	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	3.5	2	0.75	10
Scarboro	N3 D2	110.26	1,399	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	4	2	0.75	10
Seaforth	N8 D10	34.12	189	1.10	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	4	2	0.75	10
				†1.10	1.56	1.11	1.56	**1.56**	1.56	2.50	2.78	2.78	3.33	3.33				
Simcoe	N12 D6	138.60	840	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	4	2	0.75	10
Stamford	N44 D4	11.29	285	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	3	1.5	0.75	10
Stratford	N8 D4	56.75	302	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	3.5	2	0.75	10
Strathroy	N4 D4	159.71	514	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	6	2	0.75	10
Streetsville	N13 D1	130.96	681	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	3.5	2	0.75	10
Tavistock	N8 D1	139.25	534	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	5	2	0.75	10

Thamesville	N14	D11	118.28	479	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	6	2	0.75	10
Tilbury	N14	D14	143.95	615	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	5	2	0.75	10
Tillsonburg	N10	D4	197.54	1,142	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	3.5	2	0.75	10
Wallaceburg	N14	D13	186.56	1,023	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	4	2	0.75	10
Walsingham	N12	D7	300.44	1,588	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	6	2	0.75	10
Walton	N8	D3	100.51	465	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	6	2	0.75	10
Waterdown	N2	D3	87.80	1,157	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	2.5	1	0.75	10
Waterford	N12	D3	139.88	629	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	5	2	0.75	10
Watford	N18	D7	56.35	187	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	6	2	0.75	10
Welland	N1	D5	340.76	3,605	1.00	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	3	1.5	0.75	10
					†1.00	1.56	1.11	1.56	**1.56**	1.56	2.50	2.78	2.78	3.33	3.33				
Woodbridge	N16	D1	266.91	1,509	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	3	2	0.75	10
Woodstock	N10	D2	183.56	960	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	3	2	0.75	10

Total, Niagara system....10,964.47 71,400 *See footnote on page 51. †Summer cottage rates. ‡See heading to first page of table.

GEORGIAN BAY SYSTEM

					$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	cents	cents	cents	%
Alliston	GS32	D1	69.59	309	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	6	2	0.75	10
Arthur	GE13	D2	24.01	63	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	6	2	0.75	10
Bala	GB13	D1	71.32	508	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	5	2	0.75	10
Barrie	GS4	D1	103.47	840	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	5	2	0.75	10
Baysville	GM10	D1	53.95	328	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	6	2	0.75	10
Beaumaris	GM7	D1	79.60	571	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	5	2	0.75	10
Beaverton	GW2	D1	58.99	558	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	5	2	0.75	10
Beeton	GS33	D1	1.80	5	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	6	2	0.75	10
Bradford	GS37	D1	60.00	198	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	6	2	0.75	10
Bruce	GE19	D1	196.40	789	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	5	2	0.75	10
Buckskin	GS24	D1	5.55	36	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	6	2	0.75	10
Cannington	GW3	D1	35.74	146	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	6	2	0.75	10
Chatsworth	GE3	D1	13.20	54	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	6	2	0.75	10
Cookstown	GS35	D1	4.83	9	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	6	2	0.75	10
Creemore	GS10	D2	111.86	383	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	5	2	0.75	10
Dundalk	GE5	D1	32.09	90	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	6	2	0.75	10
Elmvale	GS7	D1	51.13	267	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	5.5	2	0.75	10
Flesherton	GE1	D1	33.59	136	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	6	2	0.75	10
Gravenhurst	G34	D1	16.37	82	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	5	2	0.75	10
Hawkestone	GS9	D1	83.73	167	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	3	1.5	0.75	10

RURAL POWER DISTRICTS—MILES OF LINE, NUMBER OF CONSUMERS AND RATES—OCTOBER 31, 1939—Continued

Rural power district	Rural rates																		
	Class				1B	1C	2A	2B	3*	4	5	6A	6B	7A	7B	Gross consumption charges			Prompt payment discount
	Property number		Miles of line	No. of consumers	Gross monthly service charge to regular consumers											First energy rate‡	Second energy rate‡	Rate for all additional	
					$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	cents	cents	cents	%
Holstein	GE7	D1	15.10	49	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	6	2	0.75	10
Huntsville	GM2	D1	113.44	568	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	5	2	0.75	10
Innisfil	GS31	D1	47.24	1,099	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	6	2	0.75	10
Kirkfield	GW6	D1	36.86	147	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	6	2	0.75	10
Lucknow	GE24	D1	9.33	55	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	6	2	0.75	10
Mariposa	GW9	D1	75.39	436	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	6	2	0.75	10
Markdale	GE1	D2	28.45	119	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	6	2	0.75	10
Meaford	G14	D1	70.73	349	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	6	2	0.75	10
Medonte	GS18	D1	83.00	380	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	5	2	0.75	10
Midland	GS1	D1	99.86	771	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	5	2	0.75	10
Minden	G37	D1	80.30	394	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	5	2	0.75	10
Mount Forest	GE9	D1	24.50	53	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	6	2	0.75	10
Neustadt	GE8	D1	19.81	106	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	5	2	0.75	10
Nottawasaga	GS5	D1	19.87	148	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	5	2	0.75	10
Orangeville	GE12	D1	121.40	386	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	6	2	0.75	10
Owen Sound	GE2	D1	42.57	231	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	5	2	0.75	10
Port Perry	GW12	D1	63.42	562	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	6	2	0.75	10
Ripley	GE24	D2	93.57	287	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	6	2	0.75	10
Sauble	GE46	D1	86.25	408	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	6	2	0.75	10
Shelburne	GE10	D1	32.58	107	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	6	2	0.75	10
South Falls	GM1	D1	14.60	47	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	5	2	0.75	10
Sparrow Lake	GW1	D1	67.60	607	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	4	2	0.75	10
Tara	GE15	D1	65.06	268	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	6	2	0.75	10
Thornton	GS36	D1	12.30	44	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	6	2	0.75	10
Tottenham	GS34	D1	23.41	58	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	6	2	0.75	10
Utterson	GM8	D1	63.09	322	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	6	2	0.75	10
Uxbridge	GW11	D1	75.18	292	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	6	2	0.75	10
Wasaga Beach	GS10	D1	26.58	1,242	†1.00	1.75	....	....	....	....	....	....	....	....	....	4.5	1.5	....	10
Wroxeter	GE22	D1	70.80	443	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	6	2	0.75	10

Total, Georgian Bay system . . 2,689.81 15,817 *See footnote on page 51. †These rates apply to regular consumers and summer cottages.
‡See heading to first page of table.

EASTERN ONTARIO SYSTEM

Alexandria	QL15	D1	74.57	302	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	6	2	0.75	10
Arnprior	QM10	D1	58.17	573	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	6	2	0.75	10
Belleville	QC38	D1	153.64	1,069	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	3.5	1.5	0.75	10
Bowmanville	QC23	D1	68.92	313	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	5	2	0.75	10
Brighton	QC6	D1	14.59	99	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	6	2	0.75	10
Brockville	QL3	D1	168.93	1,139	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	6	2	0.75	10
Calabogie	QM13	D1	3.90	73	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	5	2	0.75	10
Campbellford	QC11	D1	48.13	167	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	6	2	0.75	10
Carleton Place	QH5	D1	48.62	161	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	6	2	0.75	10
Chesterville	QL5	D1	161.61	831	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	6	2	0.75	10
Cobourg	QC13	D1	192.60	918	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	5	2	0.75	10
Colborne	QC7	D1	86.25	427	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	5	2	0.75	10
Cornwall	QL1	D1	37.96	101	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	6	2	0.75	10
Fenelon Falls	QC30	D1	129.87	813	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	6	2	0.75	10
Iroquois	QL9	D1	118.99	579	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	6	2	0.75	10
Kemptville	QH9	D1	7.97	74	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	6	2	0.75	10
Kingston	QC44	D1	305.69	1,674	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	5	2	0.75	10
Lakefield	QC18	D1	98.84	408	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	6	2	0.75	10
Madoc	QC33	D1	53.59	166	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	5	2	0.75	10
Marmora	QC47	D1	4.28	38	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	6	2	0.75	10
Martintown	QL13	D1	78.72	354	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	6	2	0.75	10
Maxville	QL14	D2	223.37	1,048	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	6	2	0.75	10
Millbrook	QC25	D1	42.45	203	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	6	2	0.75	10
Napanee	QC43	D1	281.13	1,219	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	5	2	0.75	10
Nepean	QT1	D1	253.17	1,667	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	3	1.5	0.75	10
Newcastle	QC22	D1	58.06	226	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	6	2	0.75	10
Norwood	QC31	D1	45.52	228	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	6	2	0.75	10
Omemee	QC26	D1	28.01	68	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	5	2	0.75	10
Oshawa	QC24	D1	206.58	2,322	1.00	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	3	1.75	0.75	10
					†1.00	1.56	1.11	1.56	**1.56**	1.56	2.50	2.77	2.78	3.33	3.33				
Pembroke	QM30	D1	19.96	58	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	6	2	0.75	10
Perth	QH2	D1	94.93	401	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	6	2	0.75	10
Peterborough	QC20	D1	122.29	1,505	0.63	1.11	0.79	1.11	**1.11**	1.56	2.01	2.57	2.78	3.33	3.33	4	2	0.75	10
					†0.63	1.16	0.79	1.21	**1.56**	1.56	2.01	2.57	2.78	3.33	3.33				
Prescott	QL2	D1	77.37	364	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	6	2	0.75	10
Renfrew	QM16	D1	57.83	335	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	6	2	0.75	10
Smiths Falls	QH3	D1	110.77	705	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	6	2	0.75	10

RURAL POWER DISTRICTS—MILES OF LINE, NUMBER OF CONSUMERS AND RATES—OCTOBER 31, 1939—Continued

Rural power district	Rural Rates																		
	Class				1B	1C	2A	2B	3*	4	5	6A	6B	7A	7B	Gross consumption charges			Prompt payment discount
	Property number		Miles of line	No. of consumers	Gross monthly service charge to regular consumers											First energy rate‡	Second energy rate‡	Rate for all additional	
					EASTERN ONTARIO SYSTEM—Continued														
					$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	cents	cents	cents	%
Stirling	QC35	D1	78.62	257	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	5	2	0.75	10
Sulphide	QC34	D1	61.74	256	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	6	2	0.75	10
Trenton	QC3	D1	100.70	449	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	5	2	0.75	10
Warkworth	QC49	D1	20.66	74	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	6	2	0.75	10
Wellington	QC45	D1	286.06	1,213	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	6	2	0.75	10
Williamsburg	QL7	D1	56.78	267	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	6	2	0.75	10
Total, Eastern Ontario system			4,141.84	23,144															
					THUNDER BAY SYSTEM														
Fort William	P10	D1	138.20	533	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	4	2	0.75	10
Nipigon	P6	D1	5.60	14	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	4	2	0.75	10
Port Arthur	P2	D1	73.32	344	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	4	2	0.75	10
Total, Thunder Bay system			217.12	891															
					NON-SYSTEM PROPERTIES														
Connaught	XA22	D1	......	......	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	6	2	0.75	10
Crystal Falls	XS7	D1	......	......	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	6	2	0.75	10
Kapuskasing	XA14	D1	......	......	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	6	2	0.75	10
Manitoulin	XM1	D1	96.09	462	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	6	2	0.75	10
North Bay	XZ4	D1	28.05	596	0.87	1.11	1.01	1.11	**1.11**	1.56	2.17	2.68	2.78	3.33	3.33	6	2	0.75	10
					†0.87	1.38	1.01	1.38	**1.44**	1.56	2.17	2.68	2.78	3.33	3.33				
Powassan	XZ8	D1	17.35	75	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	6	2	0.75	10
Rainy River	XR1	D1	......	......	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	6	2	0.75	10
Sudbury	XS5	D1	11.77	772	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	5.5	2	0.75	10
Teck	XA16	D1	......	......	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	6	2	0.75	10

Total, all systems: Miles of line, 18,166.50. ¶Number of consumers, 113,157. ¶This total includes 460.25 miles of primary line under construction on October 31, 1939, and service to 1,626 new consumers was not completed until after the end of the fiscal year.

*See footnote on page 51. †Summer cottage rates. ‡See heading to first page of table.

SECTION IV

SALES PROMOTION

DURING the first two decades of its existence, the Hydro enterprise experienced a continuous and rapid growth. This growth was influenced by a succession of stimulating causes, culminating in the economic boom of the late twenties. Except for one or two circumstances, however, the remarakble growth of Hydro service during these decades was no isolated pheńomenon. Over the world, in industry and in the home, electricity was becoming recognized as the most efficient servant of mankind. But to this natural advantage of electricity the publicly-owned Hydro enterprise, assisted by low-cost hydro-electric power, added the attractive feature of low rates which, being based upon service at cost, were inherently promotional in form. As a result, Ontario has always been among the leaders in the per capita use of electricity.

The chief problem of the Commission during the first twenty years of its existence was that of providing sufficient power to meet the ever-pressing demand. The product which Hydro had to deliver virtually sold itself and, it will be recalled, during the later years of the last war, restrictions had to be imposed upon the consumption of electricity. The economic depression ended this period of rapid growth, and since 1930 the Commission has had ample supplies of power to meet anticipated load growth.

In recent years, therefore, the Commission has been able to urge upon the municipalities and the citizens of Ontario the adoption of a more aggressive sales policy which, by inducing a fuller use of Hydro service, would result in further raising the already relatively high standard of living in Ontario. In accordance with this policy, the Commission during 1939 enlarged its sales promotional activities, and in connection therewith organized a new Sales Promotion department.

Plans formulated in connection with sales promotion efforts provided for an organization which would be able to work directly in co-operation with the municipal Hydro systems and other sections of the electrical industry, and for a reasonably comprehensive advertising programme. During the fiscal year the department operated under a budget approved by the Commission in November, 1938, and the amount expended was well within the amount allocated.

The results of the first year's work have, it is believed, been satisfactory, and while it is difficult, and in many cases impossible, to evaluate with any degree of statistical accuracy the results of the work undertaken, it may be stated that quite definite value was received for the expenditures made. Moreover, it must be remembered that the benefits achieved in one year to a very large extent repeat themselves during the following years.

Advertising

The Commission's advertising programme was divided into four principal sections: institutional, domestic, rural, and commercial and industrial.

Coupled with the institutional advertising programme was a Radio programme which was broadcast for thirteen weeks, during the period from February to April. The Commission has evidence that the programme was well received, and had a direct benefit in building up public consciousness of the value of electrical service. The remainder of the institutional programme was devoted to advertising carried in a group of financial and executive magazines, and there are indications that this advertising did much to foster a better understanding of Hydro, and a more friendly feeling towards it.

The domestic advertising programme was mainly concentrated in the daily newspapers of the Province. It was designed to support the efforts of municipal utilities in connection with a series of electric demonstration weeks which were held in the spring and early summer seasons. Although it is difficult to evaluate the benefits of this advertising, it is known that during the course of the year there was in Ontario a substantial increase in purchases of electrical household equipment as compared with previous years.

One of the most effective and worth-while advertising campaigns undertaken during the year was that carried in farm papers. Rural power district superintendents and electrical manufacturers indicate that this programme was most beneficial, and was responsible for a large increase in electrical farm applications.

Commercial and industrial advertising, carried in trade and business magazines, was directed mainly at the retail stores of the Province, and dealt principally with the question of better lighting. This advertising, which is relatively low in cost, supported the field operations in commercial lighting, and was quite helpful.

Some idea of the coverage of the advertising programme may be gained by multiplying the circulation of the publications used by the number of advertisements. Adding to this total, about 600,000 listeners to the radio programmes, it is estimated that about 9,400,000 "messages" were conveyed to the public of Ontario during the year.

Bulletins Published

Coupled with the space advertising, a number of booklets for the general use of the municipal Hydro utilities and rural power districts were issued. Some of these booklets, dealing with various applications of the use of electricity, were for distribution to the consumer. Others were for the purpose of stimulating the individual Hydro utility to carry out greater promotional effort in its local area.

The chief booklets issued were: a 20-page booklet, "Hydro 1939 Range Campaign", designed to stimulate municipal effort and to provide advertising material for use by Hydro utilities; a 20-page booklet, "Electric Demonstra-

HYDRO
1939
RANGE
CAMP
39 STEPS TO BETTER BUSINESS
Hydro
1939 1940
HOT WATER HEATER
SALES AND ADVERTISING
CAMPAIGN
HYDRO
INDUSTRY
AGRICULTURE
MINING
HYDRO SERVES ON THE "HOME FRONT"
ACTION
on the home front!
Hydro Helps Industry Mobilize Its Full Force
HYD
ELECTRIC POWER COMM
HYDRO LIGHTING serves you 3 ways on the farm
WHAT!..Out of Hot Water Again?
POWER COMMISSION
How to Keep the Cook Cool
the Kitchen Clean
FOR A BRIGHT FUTURE
HYDRO LAMPS
Cost is no more than A CAN OF MILK!
LOCAL UTILITY
Enjoy Hydro
HOT
HYDRO

Representative group of booklets and advertisements used in sales promotion work during 1939 tion Week", issued to advise municipal Hydro systems of this campaign and provide information for successful operation; a 22-page booklet, "Hydro Water Heater Manual", designed to stimulate municipal effort on water heaters and to provide advertising material for use in this connection; a 20-page booklet, "39 Steps To Better Business", issued to promote better lighting for commercial use; and "Hydro On The Farm", a 14-page booklet to encourage the use of Hydro service by the rural consumer.

Smaller bulletins were issued to stimulate sales effort by industry in the rural field and to provide advertising material in connection with Hydro lamp sales promotion. In addition, a number of leaflets on ranges, water heaters and appliances were published and distributed by the local Hydro utilities with lighting bills or in other ways.

Domestic Promotion

During the year, sales promotion field men have worked actively in nearly all of the Hydro municipalities in the Niagara, Georgian Bay and Eastern Ontario systems. Each municipal utility was encouraged, with considerable success, to carry out increased promotion of its domestic load. At the end of the fiscal year 1938, only 124 Hydro utilities were active in the promotion of electric range load. Of this number 88 were providing free range service wiring, and 36 were providing such wiring in part. At the end of the 1939 fiscal year, 180 Hydro utilities (an increase of 56) were providing such service, 115 of them giving completely free range service wiring, and the other 65 giving it in part. In addition, a large number of the municipal utilities have undertaken to finance electric ranges on an equitable basis, not only through their own Hydro shops, but also for the dealers in the community. In so far as the range campaign is concerned, the estimated number of electric ranges installed in Ontario during the year is some twenty per cent greater than during the previous year.

Many of the municipal utilities are also assisting the local electrical industry by co-operating in advertising programmes, and by joining with the dealers in endeavouring to build up the domestic appliance load. As a result of the domestic promotion work, it is estimated that domestic consumption of the municipal Hydro systems has increased by some 6,500,000 kilowatt-hours, or more during the year, over and above the normally expected load growth without additional promotion work.

Rural Promotion

In addition to the advertising programme carried out for the benefit of the rural sections, direct field promotion work was successfully carried forward by means of the Rural Travel Shop. This Travel Shop consisted of a large demonstration trailer completely equipped with electrical appliances. It visited most of the rural power districts, and gave demonstrations at many of the Fall fairs, covering 3,460 miles and visiting 65 towns. At 114 demonstrations and cooking schools there was an aggregate attendance of more than 27,000 people. Nearly 60,000 visitors at Fall fairs inspected the Rural Travel Shop and much enthusiasm was evoked by the displays and demonstrations.

It is estimated that the operation of the Travel Shop increased rural consumption of electrical energy by some 1,000,000 kilowatt-hours. A further indication of its value is that a greater number of ranges than in any previous years were financed by the Commission on the farms of Ontario.

Commercial and Industrial Promotion

Previous to the formation of this department, commercial lighting promotion had been started throughout the Province. During the year, this work was enlarged. Six lighting engineers, working on behalf of the municipal Hydro systems, made lighting surveys in individual businesses, and presented reports which have largely been acted upon. About 250 retail stores comprised about 41 per cent of the recommendations made, and 182 schools an added 30 per cent. This work has resulted in a worth-while increase in lighting load and in kilowatt-hour consumption. The estimated increased annual consumption by commercial lighting consumers aggregates about 8,500,000 kilowatt-hours.

Comparatively little work was carried out in the early months of the year in connection with industrial plants, but since the commencement of the War, every effort has been directed toward serving industry, and field work promoting more efficient lighting in manufacturing plants is being zealously carried forward. Undoubtedly, this effort will contribute towards increased production for War service.

A small group of industrial engineers working in the department carried out surveys of various plants. Reports were submitted to these plants, recommending changes which will improve their operating conditions and incidentally increase their loads.

During 1940, an effort will be made to increase the applications of electricity to industrial operations, and to maintain the use of electricity at the most economical and effective level. Special attention will be paid to those plants manufacturing war equipment.

Sales of Lamps and Equipment

The sale of miscellaneous supplies and equipment including water heater equipment to the municipal Hydro systems has amounted during the course of the year, to a total of $233,776. In addition to these sales of miscellaneous equipment, the distribution of Hydro lamps to the municipal systems has substantially increased. In 1939, there were a total of 912,147 lamp units handled, as compared with 693,832 in 1938—an increase of 32 per cent.

General Conclusions

From information gathered from all sections of the electrical industry, it is believed that the results obtained by the sales promotion activities of the Commission during 1939 were of substantial value. The efforts put forth in 1939 and the training and organization of the Sales Promotion staff will have a cumulative beneficial effect upon future operations.

In the course of this survey some estimates of the added kilowatt-hour consumption attributable to the sales promotion efforts have been given. The grand total of this increased annual consumption is about 16,900,000 kilowatt-hours, representing a continuing annual increase in revenue to the municipal Hydro systems of some $260,000.

During the coming year the sales promotion efforts of the Commission will be modified and co-ordinated with other activities in order to ensure that Hydro service gives the maximum possible help to the war efforts of Ontario, particularly in the efficient manufacture of war supplies and in maintaining agricultural production.

SECTION V

HYDRAULIC ENGINEERING AND CONSTRUCTION

DURING 1939 increasing power demands made it necessary to devote time and attention on all systems to hydraulic engineering studies and estimates of costs, relating mainly to future construction of additional generating capacity.

In active construction the Hydraulic department was concerned chiefly with the extension to the Ear Falls generating station by the installation of the third unit. Attention was also given to the design and installation of various protective works intended to further safeguard the Commission's power plants.

NIAGARA SYSTEM

At the present time the DeCew Falls development is the chief source of supply of power to the 66⅔-cycle division of the Niagara system. Growth in load on this division made it necessary to provide additional pondage at DeCew Falls, which was done by raising the normal high-water level in the reservoirs from elevation 554.5 to elevation 555.5. To provide sufficient freeboard for this higher water level, it was decided to raise portions of the earth dykes and to build other temporary works. This work is proceeding.

A timber bridge, crossing a small channel in the reservoir, was dismantled and replaced by an earth and rock fill.

Further studies and cost estimates were made to determine the feasibility of rebuilding the present DeCew Falls plant to operate as a peak-load plant on the Niagara 25-cycle system.

At the Queenston development certain betterments were carried out. Changes were made to the sump pumps and discharge lines in the power house. Various protective works were carried out above and at either end of the power house to safeguard the plant from damage from falling rocks.

At the Ontario Power plant two service-unit generators were changed over from turbine drive to motor drive. The hydraulic turbines which had previously driven these generators were removed and their appurtenant penstocks and draft tubes were blocked off.

SURVEY OPERATIONS
Platform used for drilling to determine rock elevation

GEORGIAN BAY SYSTEM

At Eugenia generating station the No. 2 surge-tank housing, which had been destroyed by fire, was replaced by one of fire-resistant design.

The Ragged Rapids development, situated below Bala on the Musquash river, was in operation by November 1938, and all work in hand was completed during the subsequent year. A description of the plant was given in the last annual report.

The continued load growth in the Georgian Bay system, which following the completion of the Ragged Rapids generating station reached 40,000 horsepower in 1939, made it desirable to continue studies and field surveys and to make preliminary designs and cost estimates respecting other power sites available in the district.

EASTERN ONTARIO SYSTEM

Hydraulic studies, preliminary designs and cost estimates were continued covering possible power developments and storage basins on the Madawaska river.

At Fenelon Falls, hydraulic tests were carried out, both at the Commission's plant and at the plant owned by the municipality.

THUNDER BAY SYSTEM

Increased loads on the Thunder Bay system necessitated studies for future power resources. These studies embraced plans for possible new developments on the Nipigon river upstream from the present generating stations, using present flows, and also plans for the efficient utilization of flows derived from possible diversion of Ogoki river water down the Nipigon river.

At the Alexander generating station the log-slide was repaired and lined with steel plate.

NORTHERN ONTARIO PROPERTIES

Abitibi District

Field surveys were made on the French and Mississagi rivers to provide data for preliminary designs and cost estimates in connection with studies of new power sources in the Abitibi district.

Patricia-St. Joseph District

The continued growth of mining loads in the Patricia and St. Joseph districts required that further generating capacity be provided. Careful studies revealed the fact that the linking up of these two districts would effect operating economies and improvements in regulation and would also safeguard essential power supplies in the event of breakdown to the generating plants, either at Ear Falls or Rat Rapids. Furthermore, interconnection would enable the growing power demand of both districts to be met initially by the enlargement of the Ear Falls development in the Patricia district.

The 48-mile transmission line from Ear Falls to the Uchi line was therefore extended 113 miles to Crow River where it is now linked to the transmission line to the Pickle Lake area. This permits the two plants to be operated in parallel as a co-ordinated system with better frequency regulation at Rat Rapids provided by the stabilizing effect of the larger Ear Falls plant.

The Ear Falls development on the English river is situated at the outlet of Lac Seul in the district of Patricia. The English river is one of the large tributaries of the Winnipeg river on which a number of power developments serving Winnipeg and other parts of the province of Manitoba have been constructed. In 1928-1929 a conservation dam was built at the outlet of

EAR FALLS DEVELOPMENT—ENGLISH RIVER
Power house as extended for unit No. 3

EAR FALLS DEVELOPMENT—ENGLISH RIVER
Lower end of left-hand conduit scroll case and speed ring, for unit No. 3

Lac Seul, the governments of the Dominion and of the Province of Ontario co-operating. The dam regulates the outflow of the lake for the benefit of present and future developments on the English and Winnipeg rivers. It creates a reservoir having a storage capacity of 4,500,000 acre-feet, which is sufficient to effect almost complete regulation of the outflow. The drainage area above the dam covers about 10,200 square miles.

The design of the dam provided for future power development, but the opening up of nearby mining properties during the period of construction justified the immediate provision of a power plant at the site. The initial development undertaken early in 1929 consisted of a small plant with an installation of a single unit of 5,000 horsepower under a head of 36 feet. The unit was placed in service on Christmas day, 1929. A second similar unit was installed in 1937, the turbines in both cases being of the fixed-blade propeller type.

Unit No. 3 has a vertical turbine rated at 7,500 horsepower at 36 feet of head, 150 r.p.m., with an automatically adjustable blade runner of the Kaplan type. The servomotor which controls the adjustable blades of the turbine runner is built into the turbine shaft and an oil-pressure governor controls the unit. This unit is the second of the Kaplan type to be installed in the Commission's plants. The high efficiencies given by the Kaplan runner over a wide range in load and discharge will enable the Ear Falls plant to make the most economical use of storage water.

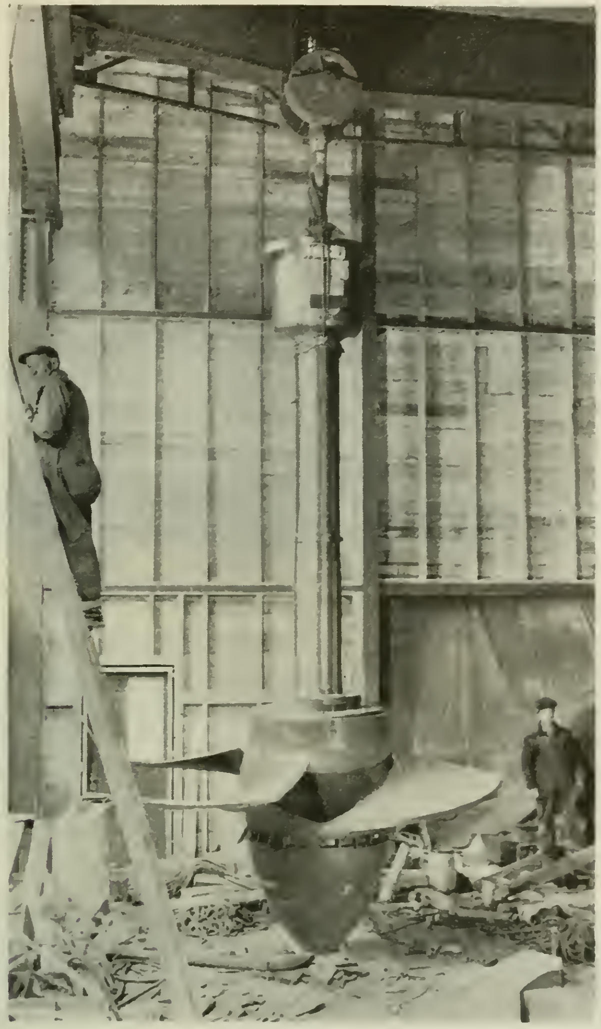
The vertical generator is direct connected to the turbine, and is rated at 6,000 kv-a., 90 per cent power-factor, 6,600 volts, 150 r.p.m., 60 cycles, and has a 75-kw. main exciter and a 5-kw. pilot exciter direct connected thereto.

The turbine settings for the three units installed to date are each of reinforced concrete with spiral type scroll case, and are about 170 feet downstream from the regulating dam. Water is conveyed from the intakes, which are located in power sluices in the regulating dam, through penstocks to the scroll cases. The penstocks for units Nos. 1 and 2 are wood stave, and for unit No. 3 reinforced concrete nearly square in cross-section.

Units Nos. 1 and 2 are constructed with short conical draft tubes of plate steel reinforced with a concrete envelope. Unit No. 3 is provided with a concrete elbow type draft tube. When completed, the plant will contain four units having a total capacity of 25,000 horsepower under a head of 36 feet.

Long Lac Diversion

The Long Lac diversion project was described in the last annual report. Work on the canal was continued and completed during the year. The canal was designed and constructed for the transportation of pulpwood and to divert ultimately an annual average flow of about 1,100 cubic feet per second southerly to lake Superior. It was placed in operation in July 1939. Up to the present time the project has been used solely for the transportation of pulpwood from the Kenogami watershed to lake Superior.



EAR FALLS DEVELOPMENT—ENGLISH RIVER
Kaplan runner and shaft, for turbine unit No. 3

HYDRAULIC INVESTIGATIONS

The routine work of the Hydraulic department included the following activities. Collection and compilation of hydrometric data. Rating of hydraulic turbines and sluiceways to enable the compilation of proper water records at the power houses, and supervision of the operation of storage basins. Investigations were carried on at certain generating stations and dams to ensure proper hydraulic operating conditions. Engineering work was continued in connection with the maintenance of the hydraulic plants on the various systems, and numerous sundry items having to do with land, contracts and agreements were handled.

At the request of the municipality of Bracebridge, turbine efficiency tests were carried out at one of the town's hydro-electric plants.

SECTION VI

ELECTRICAL ENGINEERING AND CONSTRUCTION

CONSTRUCTION work during the past year was most active in the mining districts of northern Ontario. In the co-operative systems new construction work and modifications to meet changing conditions due to load growth proceeded normally.

Co-operative Systems

An extensive investigation of conditions in the Toronto suburban area resulted in the approval of the construction of Toronto Fairbank transformer station directly north of the city near Dufferin street for the supply of power to Weston, Etobicoke township, York township, North York township, Forest Hill Village and various municipalities along Yonge street between Toronto and Lake Simcoe. The station will have an initial capacity of 50,000-kv-a, comprising two transformer units.

A new 6,000-kv-a transformer station with voltage-regulating equipment is being installed near Simcoe to improve the power supply to the municipalities south of Brant transformer station. A 67,500-kv-a transformer station at the Ontario Paper Company plant in Thorold, 15,000-kv-a additional capacity at Toronto-Bridgman transformer station and 3,750-kv-a additional capacity at St. Thomas transformer station are being installed.

Twenty-three new distributing stations were installed or under construction during the year and the transformer capacity of twenty-five other distributing stations has been increased.

Over thirty-one miles of new transmission lines were placed in service and many revisions and improvements to existing lines were made. Distribution circuits have been extended about 2,650 miles for the supply of power to rural customers of the co-operative systems.

Northern Ontario Properties

An additional 6,000-kv-a generator is being installed at Ear Falls generating station for the supply of power to the Patricia and St. Joseph districts, which were combined during the year. A 44,000-volt tie line was built be-

TRANSPORTATION IN NORTHERN ONTARIO
Moving survey party from lake to lake along route of proposed transmission line

TRANSMISSION LINES—NORTHERN ONTARIO PROPERTIES
Typical pole on 44,000-volt transmission line, Ear Falls generating station to Sioux Lookout

tween the two districts and a new 3,750-kv-a transformer station was installed at Crow River to effect the tie. A new 15,000-kv-a transformer station is being installed at Timmins and a 1,000-kv-a transformer station was built at Shining Tree. Five new distributing stations were installed in the mining districts and the capacity of another was increased. Metering equipment was installed for the measurement of power supply to seven new mining companies and to take care of the increased power demand of four existing mining customers. A total of 306 miles of transmission lines were erected and also 22 miles of distribution circuits for the supply of power to rural customers.

Planning for the Future

Expansion and growth of the various systems during recent years has introduced complex technical problems requiring advance planning and the maximum co-operation that can be secured between the various branches of the Electrical Engineering department and other departments. To ensure this co-ordination of effort, a Planning section has been established in connection with the Electrical Engineering department.

GENERATOR, TRANSFORMER AND DISTRIBUTION STATIONS

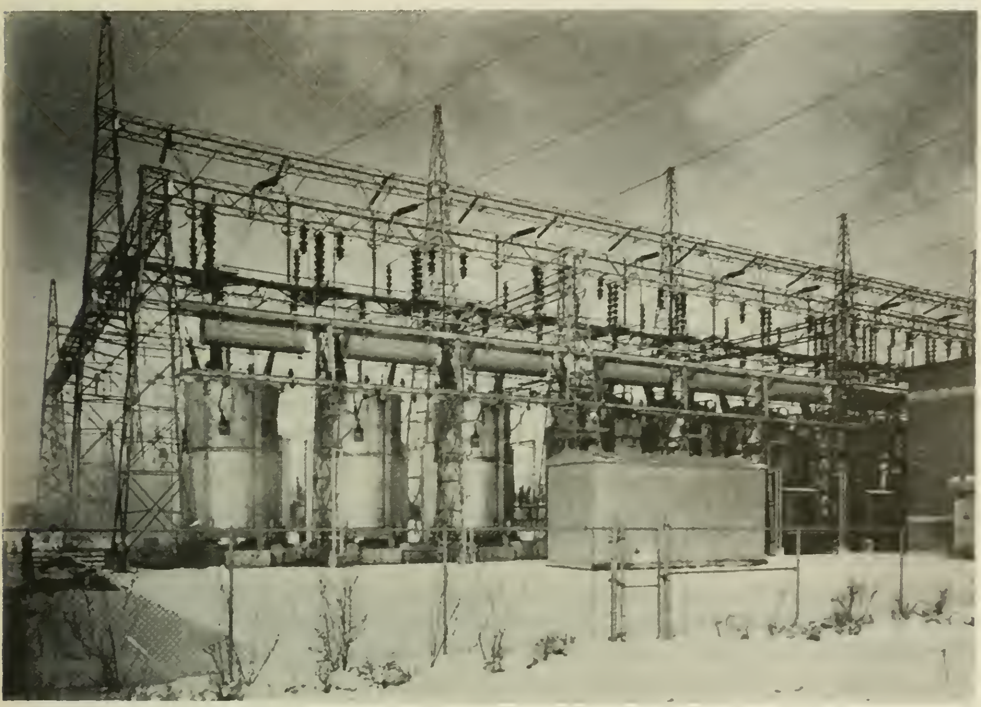
NIAGARA SYSTEM

Niagara District—A transformer station is being installed on the property of the Ontario Paper Company to supply power for the industrial load of this company, Beaverwood Fibre Company and the customers on the 12,000-volt feeders to Port Robinson. A bank of three new 22,500-kv-a transformers with spare unit, metal-clad low-voltage equipment and 110,000-volt switching equipment, were purchased and construction work is under way. The station will be in service later in the year.

Distributing stations known as Fonthill, Virgil and Pelham Road, were installed for the supply of power to Fonthill and portions of the Welland, Niagara and Grantham rural power districts. A bank of three new 150-kv-a transformers was purchased for Fonthill, a three-phase, 300-kv-a transformer was purchased for Virgil and a bank of three 75-kv-a units was obtained from system reserve for Pelham Road. The three stations are now in service.

Hamilton and Dundas District—At Dundas transformer station the installation of two 4,000-kv-a auto-transformers referred to in last year's report was completed and placed in service. The distributing stations on the Caledonia and Hagersville circuits were changed at the same time to operate at 26,400 volts.

Aldershot and Burlington Beach distributing stations were installed and placed in service for the supply of power to Waterdown rural power district and Burlington Beach respectively. A bank of three new 150-kv-a transformers was purchased for use at the former station and three 150-kv-a transformers released from Tillsonburg rural station were used at the latter station.



LEASIDE TRANSFORMER STATION
General view showing three 25,000 kv-a 220,000/110,000/13,200-volt transformers in Bank No. 8

The capacity of Ryckman distributing station was increased with the installation of a bank of three new 150-kv-a transformers, replacing the original bank of three 75-kv-a units.

A 350-kv-a voltage-booster was placed in service in the 4,000-volt circuit to Jarvis.

The capacity of Bronte distributing station was increased when an additional bank of three 50-kv-a transformers was installed and placed in service on March 26, 1939. The transformers had been released from Smithville distributing station. Homer distributing station was dismantled and the two 250-kv-a transformers transferred to system reserve.

Toronto and York District—The work under way at Toronto-Leaside transformer station, reported in last year's Annual Report, was completed and the equipment was placed in service on November 27, 1938.

The installation of an additional bank of three 10,000-kv-a transformers at Toronto-Bridgman transformer station was authorized. Two new transformers were purchased and will be used with the spare unit to complete a 30,000-kv-a bank and replace an existing bank of 15,000-kv-a capacity.

Authorization was given for the installation of a 110,000-volt transformer station for the supply of power to the suburban area north of Toronto. The station will be situated immediately north of the city between Dufferin and Bathurst streets and will be known as Toronto-Fairbank transformer station.

Two new 25,000-kv-a, three-phase, forced-air-cooled transformers and two 138,000-volt oil circuit-breakers have been purchased for the installation which will be completed and placed in service in the spring of 1940.

A distributing station was installed at Malton for the supply of power to Woodbridge rural power district and the air-port. A bank of three new 150-kv-a transformers was purchased and the station completed and placed in service January 15, 1939.

At Long Branch distributing station the bank of three 250-kv-a transformers was replaced with a bank of three 500-kv-a units in order to provide additional capacity for the increasing power demand.

The capacity of Port Credit distributing station was increased with the installation of a bank of three new 500-kv-a transformers outdoors to replace the original indoor bank of three 75-kv-a transformers and the 300 kv-a, three-phase unit.

A 300-kv-a voltage regulator was installed near Milton to regulate the voltage of the 4,000-volt circuit to Campbellville.

Authorization was given for the installation of five 1,500-kv-a unit-type stations: Kingsway in Etobicoke township, Glencairn in North York township, No. 1 and No. 2 in East York township and Fallingbrook in Scarboro township. Three 3,000-kv-a unit type stations were authorized for York township. All these stations are being made suitable for receiving power at 26,400 volts when it is available. The necessary equipment was ordered but the construction of the stations will not be completed until early in 1940.

London District—The installation of two auto-transformers at London transformer station, reported in last year's Annual Report was completed and the equipment placed in service on April 16, 1939 and the distributing stations on the Dashwood and Strathroy circuits were changed at the same time for operation at 26,400 volts.

The original bank of three 75-kv-a transformers at Thamesford distributing station was replaced by a bank of three new 150-kv-a transformers to provide additional capacity for the station.

Preston District—Galt distributing station was installed north of the city of Galt to supply power to Galt rural power district. A bank of three new 150-kv-a transformers was purchased and the station completed and placed in service on April 3, 1939.

Kitchener District—Wellesley distributing station was installed for the supply of power to the village of Wellesley and the rural power districts of Baden, St. Jacob's and Tavistock. A 300-kv-a three-phase transformer obtained from system reserve was used for the installation and the station was placed in service on February 19, 1939.

The capacity of Mannheim distributing station was increased with the installation of a bank of three 75-kv-a transformers, duplicates of the existing transformers.

Stratford District—Clinton distributing station was installed for the supply of power to Clinton rural power district at 8,000 volts from the 26,400-volt circuits. A bank of three new 150-kv-a transformers was purchased for the installation and the station was completed and placed in service on July 23, 1939. The original rural station which previously supplied power for this load from the 4,000-volt bus in the municipal station was dismantled.

Woodstock District—At Woodstock transformer station two 110,000-volt circuit-breakers were replaced with motor-operated air-break disconnecting switches. The replaced oil circuit-breakers were transferred for use at Hamilton Beach transformer station.

The capacity of both Woodstock rural station and Norwich distributing station was increased with the installation in each case of a bank of three new 500-kv-a transformers replacing 250-kv-a units. The replaced transformers were installed at other stations.

The capacity of Tillsonburg rural station was increased with the installation of a bank of three new 250-kv-a transformers, replacing three 150-kv-a units, which were transferred into system reserve.

St. Thomas District—The capacity of St. Thomas transformer station is being increased and new low-voltage switching equipment and control room is being installed. A bank of three 2,500-kv-a transformers was obtained from system reserve to replace the existing bank of 1,250-kv-a units. New 13,200-volt, metal-clad switching equipment was purchased and installed outdoors east of the building. The switching equipment was placed in service in October 1939 but the remainder of the work will not be completed until early in the new year.

A new distributing station was installed to supply 4,000-volt power to the new Provincial Hospital at St. Thomas and a portion of the rural district. A bank of three new 250-kv-a transformers was purchased for the installation which was placed in service on January 23, 1939.

St. Thomas rural station was dismantled and a new station installed on the same site suitable for parallel operation with the St. Thomas Provincial Hospital distributing station for the supply of power to a portion of the St. Thomas rural district and be available as a duplicate power source for the new Provincial Hospital. A bank of three 250-kv-a transformers released from Norwich distributing station was used for this new installation and the three-phase 750-kv-a unit removed from the dismantled station was transferred to system reserve.

Brant District—Authorization was given for the installation of a transformer station near the town of Simcoe to supply 26,400-volt power to municipalities at present supplied from Brant transformer station but situated south of it. This new station will be known as Norfolk transformer station and will be supplied from the 110,000-volt circuit direct to St. Thomas. It will be equipped with a 6,000-kv-a, three-phase, self-cooled transformer with under-load voltage-control. The transformer and all other necessary equipment were purchased and the station will be placed in service early in 1940.

A distributing station was installed near Cainsville to supply power to a section of Brant rural power district. A bank of three 150-kv-a transformers was purchased for this installation and the station was placed in service on June 6, 1939.

The capacity of Port Dover distributing station was increased with the installation of an additional 300-kv-a, three-phase transformer released from Port Credit distributing station.

Kent District—Engineering assistance was given Chatham Public Utilities Commission in the purchase and installation of a 3,000-kv-a transformer and necessary switching equipment in the Chatham municipal station No. 2.

St. Clair District—The capacity of Forest distributing station was increased with the installation of a bank of three 37½-kv-a transformers in parallel with the existing bank of three 75-kv-a transformers.

GEORGIAN BAY SYSTEM

The necessary equipment was installed at Waubaushene auto-transformer station to enable the 38,000-volt circuits from Eugenia generating station to be synchronized with the rest of the system at this station.

Severn District—Penetang distributing station No. 2 was installed to supply power to Midland rural power district from the 22,000-volt circuits. A bank of three new 250-kv-a transformers and necessary switching and protective equipment were purchased and the station was placed in service on July 14, 1939. Penetang rural station was dismantled after the load was transferred to the new station. The released transformers were placed in system reserve.

A 50-kv-a, 2,400/4,800-volt transformer was installed at the Department of National Defence station at Camp Borden to supply power to the Angus feeder of the Alliston rural power district.

Fergusonvale distributing station was dismantled and the two 50-kv-a transformers were transferred to system reserve.

Eugenia District—The temporary installation at Kilsyth distributing station reported in last year's Annual Report was replaced with a new station on the same site, using the same transformer but improved metering and switching equipment.

The bank of three 50-kv-a transformers at Dundalk distributing station was replaced with a bank of three 75-kv-a units obtained from Ragged Rapids generating station. The replaced transformers were transferred to system reserve.

At Meaford distributing station three 15-kv-a transformers were installed as a booster bank to improve the distribution voltage.

Wasdell District—The capacity of Uxbridge distributing station was increased with the installation of a bank of three 150-kv-a transformers replacing a 300-kv-a, three-phase unit which was transferred to system reserve. The metering and switching equipment was replaced with more suitable equipment.

Muskoka District—The circuit from South Falls generating station to Huntsville was equipped for operation at 38,000 volts and the bank of three 400-kv-a transformers in the generating station which previously supplied 22,000-volt power to this circuit was removed and transferred into system reserve. The 22,000-volt switching, metering, and protective equipments were also replaced with 38,000-volt equipments. Huntsville distributing station was rebuilt for operation at 38,000 volts and the capacity was increased. The original bank of three 300-kv-a transformers and the 22,000-volt switching equipment were replaced with a bank of three new 500-kv-a transformers and the necessary 38,000-volt switching equipment. Huntsville rural station was dismantled and the bank of three 75-kv-a transformers was re-installed inside the building at Huntsville distributing station. The capacity was increased with the installation of a bank of three 50-kv-a transformers in parallel with the existing bank. The original Beaumaris distributing station was dismantled and a new station was installed on a more suitable site. The bank of three 150-kv-a transformers was replaced with a bank of three new 250-kv-a transformers and changes made for operation of the station at 38,000 volts. All these alterations were completed and the voltage change-over effected on May 28, 1939.

The distribution voltage at Gravenhurst was changed from two-phase to three-phase on November 6, 1938. A 400-kv-a transformer was obtained from system reserve and used with the two existing transformers to complete a three-phase bank.

EASTERN ONTARIO SYSTEM

Transformer and Distributing Stations

Central Ontario District—The necessary switching equipment was installed at Sidney transformer station for the control of a 44,000-volt circuit supplying power to Prince Edward county. Previously this circuit was connected directly to a trunk circuit.

The transformer capacity at Lindsay, Millbrook, Madoc and Marmora distributing stations and Colborne rural station was increased. A 750-kv-a, three-phase transformer released from Kingston distributing station was installed at Lindsay. A new 100-kv-a, single-phase transformer was purchased and installed at Millbrook in parallel with an existing unit of similar capacity to supply power to Millbrook rural power district. Two new 50-kv-a, single-phase transformers were purchased and installed at Madoc distributing station to supply 8,000-volt power to Madoc rural power district. A new 100-kv-a, single-phase transformer was purchased and installed at Marmora distributing station with the original two 50-kv-a units to complete a three-phase bank. A new 50-kv-a transformer similar to the two original units was purchased and installed at Colborne rural station.

The distributing station Consecon which supplied single-phase power to Wellington rural power district was replaced with a new distributing station and two new 100-kv-a transformers were purchased and installed with a similar transformer obtained from the original station for the supply of three-phase power to the same load.

Metering equipment was installed on the premises of the Bata Shoe Company at Frankford to measure the power being supplied to the company at 6,600 volts.

The power being supplied to Lakefield rural power district has been changed from 6,600 volts to 11,000 volts and metering equipment has been installed at a new location to accommodate the change in voltage.

The new municipal station installed by Kingston Public Utilities Commission replaced the distributing station for the distribution of power throughout the city. Some of the original equipment was used in the new station and the remainder was transferred to system reserve or for use at other stations on the system.

St. Lawrence District—The work underway for the Public Utilities Commission at Brockville and reported in last year's Annual Report was completed and placed in service.

The capacities of Brockville and Martintown distributing stations were increased. A 1,500-kv-a, three-phase transformer released from Kingston distributing station was installed at Brockville in parallel with the two existing units and the 2,400-volt circuits from all three transformers were connected to the Public Utilities Commission's new metal-clad switchgear. A 150-kv-a, three-phase transformer at Martintown distributing station was replaced with a bank of three new 100-kv-a transformers. The replaced unit was transferred to system reserve.

A bank of three new 250-kv-a transformers was installed at Chesterville distributing station to supply power to Chesterville rural power district and relieve this load from the other transformers.

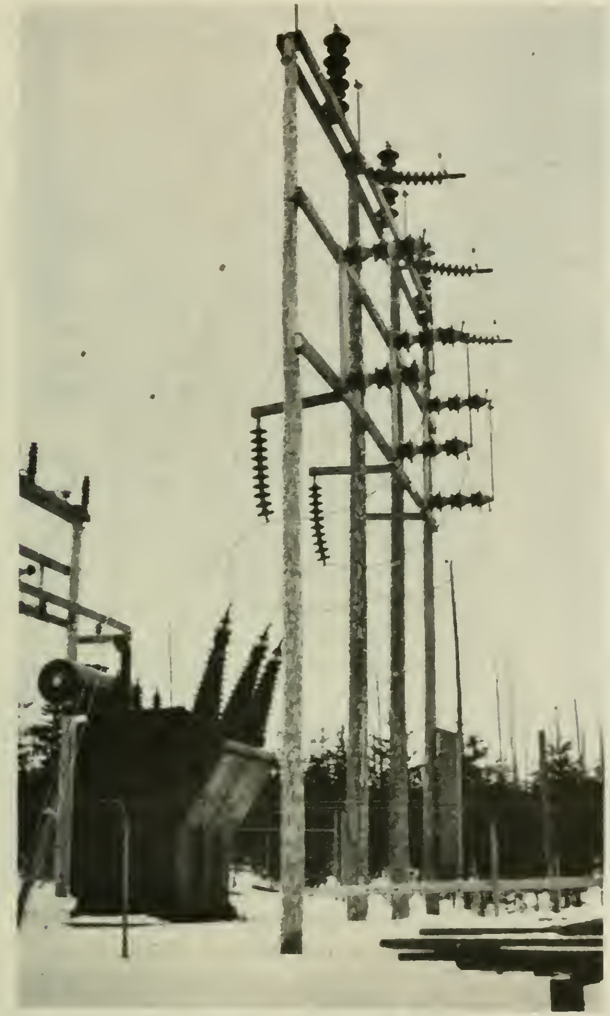
Rideau District—Forced air cooling was added to the 750-kv-a transformers at Smiths Falls distributing station to enable the existing transformers to carry the station load without the use of water for cooling and avoid the hazard of freezing in this unattended station.

THUNDER BAY SYSTEM

The new buildings which were reported in last year's Annual Report as under construction at Cameron Falls and along the right-of-way to Longlac transformer station were completed during the year.

The capacity of Geraldton distributing station was increased with the installation of a bank of three new 250-kv-a transformers to replace the original bank of three 150-kv-a units. The replaced units were installed in Rosslyn distributing station which is a new installation for the supply of power to a portion of the Thunder Bay rural power district.

Port Arthur rural station was replaced by a new station near Port Arthur transformer station to supply single-phase power to the summer-resort district east of the city. The original station was dismantled and the 75-kv-a transformer placed in system reserve. A new 150-kv-a, single-phase unit was purchased for the new installation.



TRANSFORMER STATION AT SHININGTREE

NORTHERN ONTARIO PROPERTIES

Nipissing District—At Nipissing generating station the 22,000-volt oil circuit-breaker and a number of the disconnecting-switches were replaced by more modern equipment.

North Bay distributing station No. 3 was installed to supply power to North Bay pumping plant. A bank of three new 150-kv-a transformers was purchased for the installation.

Sudbury District—The construction of the operators' houses reported in last year's Annual Report was completed during the year.

Garson distributing station was installed on the International Nickel Company's property to supply 4,000-volt power to the hamlet of Garson. A bank of three 50-kv-a transformers obtained from system reserve was used for this installation.

Abitibi District—The buildings under construction and improvements being carried out at Abitibi Canyon and reported in last year's Annual Report were completed during the year.

The additional bank of transformers and voltage-regulating equipment which was being installed at Kirkland Lake transformer station and reported in last year's Annual Report was completed and placed in service during the year.

The temporary transformer station installed at Bourkes in 1938 and referred to in last year's Annual Report was dismantled.

A transformer station was installed at Shining Tree about 70 miles north of Sudbury for the supply of power to Ronda Gold Mines Limited. The 1,000-kv-a, three-phase transformer released from Bourkes transformer station was used for this installation which was placed in service on December 20, 1938.

A new transformer station and 138,000-volt switching station is being installed at Timmins to replace the existing transformer station and provide for additional capacity. The new station will consist of a bank of three new 5,000-kv-a transformers and spare unit, five 138,000-volt oil circuit-breakers and switching equipment for the 26,400-volt feeders. The existing two banks of 1,500-kv-a transformers will be used at other stations on the system. The new station will be placed in service early in 1940.

The capacity of Hislop distributing station was increased with the installation of an additional 25-kv-a transformer similar to the original unit.

A substation was constructed for the De Santis Porcupine Mines Limited.

Metering stations were installed to measure the power supply to North Whitney Mines Limited, McIntyre Porcupine Mines Limited, Lake Shore Mines Limited, Faymar Porcupine Gold Mines Limited, Tyranite Mines Limited and De Santis Porcupine Mines Limited.

The capacity of the metering equipment was increased for Hollinger Consolidated Gold Mines Limited (Hislop property), Hoyle Gold Mines Limited, Chesterville-Larder Lake Gold Mines Limited and Delnite Mines Limited.

Patricia-St. Joseph District—Ear Falls generating station is being extended and an additional generating unit is being installed to provide capacity for the increasing power demand in the district. A 6,000-kv-a, 60-cycle, 6,600-volt, 150 r.p.m. vertical shaft generator, a bank of three 2,000-kv-a transformers, and necessary switching equipment were purchased and are being installed. The new unit will be placed in service early in 1940 and the rated generator capacity of the station will be increased to 15,500-kv-a. Additional switching equipment is being installed for the control of 44,000-volt circuit to Sioux Lookout.

Metering equipment was installed at the Cochenour-Williams Gold Mines Limited substation to measure the power supplied to this company and to Margaret Red Lake Gold Mines.

Crow River transformer station was installed near Central Patricia Gold Mines to step-up the transmission voltage for parallel operation with Patricia district and enable power to be supplied from Ear Falls generating station to St. Joseph district. A bank of three 1,250-kv-a transformers, a spare unit and all the necessary switching equipment were purchased and installed and the

DISTRIBUTING STATION AT HUDSON

station was placed in service on September 4, 1939. The transformers are at present arranged for a step-up of voltage from 23,000 to 44,000 but provision has been made for readily reconnecting the windings to permit a step-up of voltage from 23,000 to 66,000 whenever a corresponding change is made in the transmission voltage from the Patricia district.

Uchi switching station was installed on Uchi Gold Mines Limited property to enable power to be supplied to the mining company from the transmission circuit connecting the Patricia and St. Joseph districts. The station was arranged for 44,000-volt operation and placed in service on October 17, 1939 but can readily be changed for operation at 66,000 volts when the transmission voltage is raised. An operator's house was also built.

Six patrolmen's houses were constructed along the right-of-way from Crow River transformer station to Uchi switching station for the accommodation of the men patrolling the transmission line.

A distributing station was installed at Sioux Lookout and at Hudson for the supply of power to these two load centres over a 44,000-volt circuit from Ear Falls generating station. A bank of three new 150-kv-a transformers was purchased for the former installation which was placed in service on August 30, 1939. Two new 100-kv-a transformers were purchased and connected in open-delta for the installation at Hudson which was placed in service on September 16, 1939.

TRANSMISSION SYSTEMS

Increased demands and new loads have necessitated many changes and additions to the Commission's transmission systems during 1939.

At a cost of approximately $1,893,000 a total of 337.69 miles of transmission lines was placed in service, as indicated in the following tabulation; of the total, 13 miles were acquired by purchase, being 44,000-volt lines in Patricia district.

MILEAGE OF TRANSMISSION LINES PLACED IN SERVICE YEAR ENDED OCTOBER 31, 1939

	Niagara system	Georgian Bay system	Eastern Ontario system	Thunder Bay system	Northern Ontario Properties	Totals
	miles	miles	miles	miles	miles	miles
110,000-volt lines	0.68	......	......	......	......	0.68
33,000-volt to 44,000-volt lines	......	......	4.76	......	260.40	265.16
11,000-volt to 26,400-volt lines	19.92	......	......	6.15	45.78	71.85
Totals	20.60	......	4.76	6.15	306.18	337.69

In addition, revisions and improvements were made in all systems where required.

Maps showing the transmission lines and stations of the Commission will be found at the back of this Report. A summary tabulation respecting transmission lines is given near the end of this section.

The following synopsis shows, by systems, the work completed during the year.

NIAGARA SYSTEM

High-Voltage Lines

The 110,000-volt connections to Preston transformer station were revised to conform with changes within the station.

A new 110,000-volt, single-circuit transmission line on steel towers, approximately ¾-mile in length, was constructed from Holland road junction to a new station at the Ontario Paper Company.

A grounding system was installed at Queenston generating station to connect the outgoing 110,000-volt line towers to the ground bus in the screen house.

A portion of the 110,000-volt, steel-tower line between York transformer station and Toronto Strachan transformer station, 1.05 miles in length, was relocated in the section between the Humber river and Salisbury avenue, in order to clear the new construction work of the Department of Highways in that vicinity. For the same reason, one tower in one of the 110,000-volt circuits out of Queenston generating station was relocated.

Low-Voltage Lines

Niagara District—A single-circuit, 12,000-volt transmission line, 2.5 miles in length, was constructed from a tap on the line between St. Davids and Niagara-on-the-Lake to a new distributing station in the village of Virgil.

Dundas District—A single-circuit, 13,200-volt transmission line, 0.9 mile in length, was constructed from a tap on the line near Waterdown to a new distributing station at Aldershot.

Also the line south from Dundas transformer station to Hagersville distributing station, including the taps to Ryckman, Caledonia, and Decewsville distributing stations, a total length of 33.44 miles, was raised from 13,200 volts to 26,400 volts.

Toronto District—A single-circuit, 13,200/26,400-volt transmission line, 1.08 miles in length, was constructed from Forest Hill municipal station to Glencairn distributing station.

London District—One circuit of the transmission line between London transformer station and Broughdale distributing station and the extension to Ilderton, Ailsa Craig, Lucan, Exeter, and Dashwood distributing stations, a total distance of 43.32 miles, was raised from 13,200 volts to 26,400 volts.

The line between London and Strathroy, including the taps to Glendale and Delaware distributing stations, a distance of 27.10 miles, was also raised from 13,200 volts to 26,400 volts.

Preston District—The necessary switches and taps from existing lines to the new rural station on Wauchope avenue, Galt, 0.1 mile in length, were constructed to serve the Galt rural district.

Kitchener District—The former 4,000-volt rural line from Baden to Wellesley was rebuilt to carry a new 13,200-volt circuit from the point where it crosses the Commission's line between Baden and New Hamburg to Wellesley distributing station, a distance of 6.17 miles.

Brant District—A single-circuit, 26,400-volt transmission line, 1.3 miles in length, was built between the Lake Erie and Northern Railway substation, Brantford, and the Brantford municipal station No. 1, replacing the double-circuit section of 3/0 aluminum with one circuit of 336,400-cir.mil aluminum conductor.

Also a single-circuit, 26,400-volt transmission line, 4.3 miles in length, was established from Brantford municipal station No. 1 to a new distributing station at Cainsville by reconstructing a portion of the old Dominion Power and Transmission 44,000-volt line.

Essex District—A portion of 26,400-volt transmission line, 1.1 miles in length, which formerly served the hydro-electric station at Petrimoux, was dismantled.

The 26,400-volt, single-circuit transmission line between Kingsville junction and Kingsville distributing station, 0.8 mile in length, was rebuilt as a double-circuit line.

Also a portion of the 26,400-volt transmission line, 1.93 miles in length, between Kingsville junction and Leamington, was dismantled, and a new portion, 1.61 miles in length, was constructed.

Thorold District—A short tap, 0.18 mile in length, of 12,000-volt transmission line, was built and connected into the new Pelham Road distributing station, to serve the Pelham district.

Dominion Power Division—The 44,000-volt transmission line, No. 7, between Bartonville switching station and Cockshutt station, has, for the most part been dismantled. A portion east of Cockshutt station in Brantford, 4.30 miles in length, was left, and is incorporated in a new section between Brantford municipal station No. 1 and a new distributing station at Cainsville. Also a portion south and west from Bartonville switching station has been left up for service to a proposed distributing station to be erected near King street, Hamilton.

A short portion of the 10,000-volt, single-circuit transmission line, 0.3 miles in length, between Longwood switching station and the Canada Crushed Stone company, was re-routed to occupy the south side of Westwood avenue between Stroud road and Clines lane in Hamilton.

GEORGIAN BAY SYSTEM

Wasdell District—From Kirkfield junction to Kirkfield distributing station, 11.34 miles, the 9/32-inch steel sky wire was removed and a metal pole top pin was installed.

Muskoka District—From South Falls generating station to Huntsville, 26.31 miles, the ¼-inch steel sky wire was removed, a metal pole top pin was installed, and the 22,000-volt insulators were replaced with 38,000-volt units.

EASTERN ONTARIO SYSTEM

High-Voltage Lines

Between Ottawa junction and Cornwall transformer station, 54.82 miles, steel extensions were added to transmission line towers to raise the sky wire, and the telephone attachments to towers were removed.

Central District—A new 44,000-volt, single-circuit, wood-pole transmission line, 4.7 miles long, was constructed from Sidney transformer station at Trenton to Picton junction.

The 44,000-volt tap line to Millbrook distributing station was connected for three-phase operation.

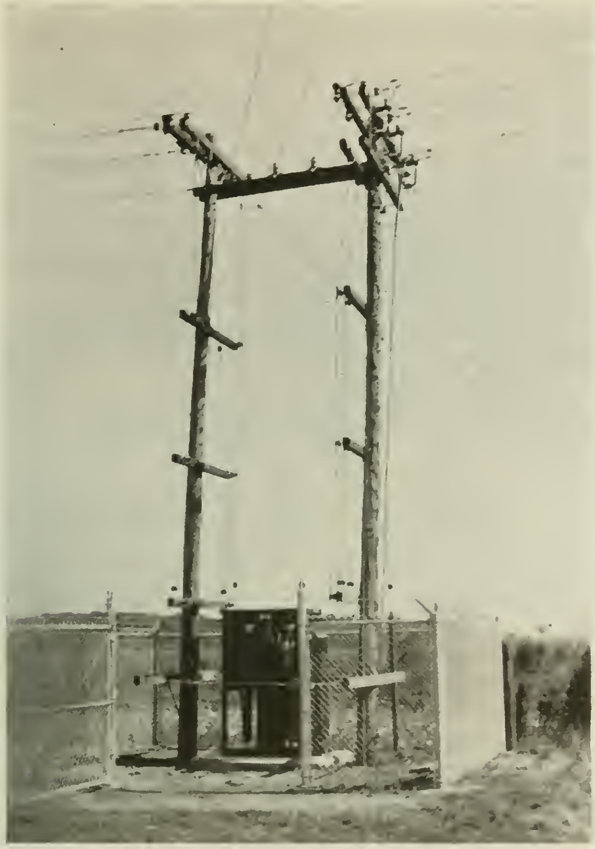
Rideau District—From Smith's Falls distributing station to Rideau junction, 1.92 miles, the 5/16-inch steel conductor was replaced with 1/0 aluminum cable steel-reinforced.

St. Lawrence District—A new 44,000-volt, single-circuit, wood-pole transmission line, 2.67 miles long, was constructed from Cornwall transformer station to Howard Smith Paper Mills.

Madawaska District—The 33,000-volt line entrance to Arnprior distributing station was rebuilt.

THUNDER BAY SYSTEM

A new 22,000-volt, single-circuit transmission line, 6.15 miles long, was constructed to Rosslyn distributing station.



DISTRIBUTION IN RURAL POWER DISTRICTS
Three-phase, 4,000-volt, automatic voltage regulator installed on concrete pad east of Blyth. Walton rural power district

Construction of the highway between Nipigon and Little Long Lac necessitated moving transmission lines at several points to clear the roadway.

NORTHERN ONTARIO PROPERTIES

Nipissing District—A new 22,000-volt, single-circuit, wood-pole transmission line, three miles in length, was built to the North Bay waterworks.

Sudbury District—Insulation on the wood-pole transmission line between Crystal Falls and Coniston generating stations was increased for 110,000-volt operation.

Abitibi District—In the Porcupine area, five 26,400-volt, single-circuit, wood-pole transmission lines, totalling approximately 10 miles in length, were constructed to mining customers.

In the Larder Lake area, $\frac{1}{4}$-mile of 26,400-volt, single-circuit, wood-pole transmission line was built to Kearns townsite.

In the West Shiningtree area, two 26,400-volt, single-circuit, wood-pole transmission lines, totalling 28 miles in length, were constructed to serve mining customers.

Patricia-St. Joseph District—A single-circuit, 44,000-volt, wood-pole transmission line, 161.7 miles long and insulated for future operation at 66,000 volts, was constructed from Ear Falls generating station to Uchi Gold Mines Limited and on to Crow River transformer station.

A single-circuit, 44,000-volt wood-pole transmission line, 85.5 miles long, was constructed from Ear Falls generating station to Sioux Lookout.

Privately-owned, 44,000-volt lines to five mining customers at Red Lake, totalling 13 miles in length, were purchased and incorporated into the transmission lines of the district.

Approximately five miles of new 22,000-volt, wood-pole transmission line was built from Crow River transformer station to provide double line service to mining customers.

TELEPHONE LINES—ALL SYSTEMS

In the Niagara system, a portion of the Dundas to Brant telephone line, 8.06 miles; portions of the St. Mary's to London line, 8 miles; and portions of the Brant to Woodstock line, 6.65 miles in length, were rebuilt. Between Allanburg and Dundas transformer station, 5.2 miles of four circuits of the "A" line, and 5.2 miles of single-circuit of the "AA" line were removed. These portions were replaced by a new portion, 5.7 miles in length, of four circuits, constructed on new poles located to the south of the former "A" line. Also, a portion of the Kent to Essex telephone line, including a tap to Tilbury, 8.5 miles in length, was rebuilt. A portion of the telephone line between York transformer station and Toronto Strachan transformer station, approximately 1.6 miles, was relocated due to highway diversions. A ¼-mile extension of the telephone service between the rural and municipal offices in the town of Harrow was installed. In the Toronto district, 4.55 miles of telephone cables were replaced. Loading coils were installed between Toronto Strachan transformer station and the administration building, and between the administration building and Toronto Bridgman transformer station.

In the Georgian Bay system, an additional telephone circuit was erected between Fergusonvale junction and Bradford junction, and the existing No. 9 iron circuit was retransposed.

In the Eastern Ontario system, 58.79 miles of No. 9 iron telephone conductor were replaced with No. 6 aluminum cable steel-reinforced between Brockville junction and Cornwall distributing station.

In the Thunder Bay system, new telephone equipment was installed to provide improved facilities for the district patrolmen, and 7 miles of telephone circuit was erected between Geraldton distributing station and Bankfield junction on existing 44,000-volt transmission line poles.

In northern Ontario, a radio link was established between Frederickhouse Dam and Timmins. At Coniston, 1.48 miles of single-circuit telephone line was constructed to provide communication between the generating station and the Bell Telephone company connection at Coniston.

WORKS
LIMITED

DISTRIBUTION IN RURAL POWER DISTRICTS
Installing submarine cable to Wolfe Island in Kingston rural power district

DISTRIBUTION IN RURAL POWER DISTRICTS
Installing submarine cable to Wolfe Island in Kingston rural power district

TOTAL MILEAGE OF TRANSMISSION LINES AND CIRCUITS

System and voltage	Kind of structures	Line route or structure miles			Circuit miles
		Total to Oct. 31, 1938	Additions 1939	Total to Oct. 31, 1939	Total to Oct. 31, 1939
Niagara System					
220,000-volt	steel	705.27	......	705.27	705.27
110,000-volt	"	716.11	7.42	723.53	1,391.74
110,000-volt	wood	67.16	......	67.16	67.16
90,000-volt	steel	65.85	......	65.85	117.60
60,000-volt	"	78.75	......	78.75	59.38
60,000-volt	wood	9.20	......	9.20	9.20
46,000-volt	steel	32.42	......	32.42	65.64
46,000-volt	wood	23.73	......	23.73	23.73
26,400-volt	"	614.88	114.44	729.32	875.53
13,200-volt	"	461.51	*105.50	356.01	427.67
13,200-volt	steel	1.17	......	1.17	2.34
12,000-volt	wood	111.26	3.66	114.92	164.62
Dominion Power division—44,000-volt	steel	34.76	......	34.76	72.07
Dominion Power division—44,000-volt	wood	145.22	*26.85	118.37	114.75
Dominion Power division—22,000-volt	"	28.69	......	28.69	38.21
Dominion Power division—10,000-volt	"	14.52	*0.06	14.46	14.46
Georgian Bay System					
110,000-volt	wood	55.83	......	55.83	55.83
38,000-volt	"	146.92	*0.03	146.89	147.32
6,600-volt	"	2.30	......	2.30	2.30
Severn district—22,000-volt	"	148.61	......	148.61	219.54
Eugenia district—26,400-volt and less	"	281.73	......	281.73	364.48
Wasdell district—22,000-volt	"	83.43	......	83.43	87.37
Muskoka district—38,000-volt	"	26.31	......	26.31	26.31
Eastern Ontario System					
110,000-volt	steel	107.08	......	107.08	110.39
110,000-volt	wood	163.44	......	163.44	163.44
44,000-volt	"	24.33	......	24.33	24.33
33,000-volt	"	42.26	......	42.26	47.94
Central district—44,000-volt and less	"	531.99	0.89	532.88	584.11
St. Lawrence district—44,000-volt	"	125.63	......	125.63	126.01
Rideau district—26,400-volt	"	62.63	......	62.63	62.63
Madawaska district—33,000-volt and less	"	58.81	......	58.81	58.81
Thunder Bay System					
110,000-volt	steel	82.12	......	82.12	164.28
110,000-volt	wood	178.21	......	178.21	178.21
44,000-volt	"	116.42	0.34	116.76	116.76
22,000-volt	"	0.35	7.52	7.87	7.87
12,000-volt	"	1.45	......	1.45	1.45
Northern Ontario Properties					
Nipissing district—22,000-volt	wood	59.40	2.99	62.39	78.91
Sudbury district—22,000-volt	"	107.31	*1.22	106.09	106.09
Abitibi district—132,000-volt	steel	362.74	......	362.74	725.48
132,000-volt	wood	190.19	......	190.19	190.19
33,000-volt and less	"	60.68	44.72	105.40	106.09
Patricia-St. Joseph district—44,000-volt	"	40.56	260.40	300.96	300.96
22,000-volt	"	28.14	4.87	33.01	33.18
Total	....	6,199.37	†313.59	6,512.96	8,239.65

*Removals. †Net increase.

DISTRIBUTION LINES AND SYSTEMS IN RURAL POWER DISTRICTS

The following tabulation shows the mileage of distribution lines constructed by the Commission in rural power districts, and the number of consumers served.

The summary indicates a total construction during the year of 2,670 miles of new line completed, and giving service to 14,111 additional consumers.

At the end of 1939 there were 111,520 rural consumers receiving service and 17,706 miles of primary line had been constructed with a capital investment approximating $33,000,000.

SUMMARY OF CONSTRUCTION IN RURAL POWER DISTRICTS

System and district	At October 31, 1938		At October 31, 1939					
			Miles of primary line			Number of consumers		
	Miles of primary line constructed	Number of consumers receiving service	Constructed	Under construction or authorized	Total	Receiving service	Authorized	Total
NIAGARA SYSTEM.....	9,671.10	64,447	10,801.73	162.74	10,964.47	70,886	514	71,400
GEORGIAN BAY SYSTEM								
Severn district.....	666.07	5,362	789.45	15.07	804.52	6,193	63	6,256
Eugenia district....	584.56	2,579	839.80	68.91	908.71	3,394	250	3,644
Wasdell district....	354.31	2,446	392.33	20.85	413.18	2,681	67	2,748
Muskoka district...	251.56	1,483	313.81	10.87	324.68	1,805	31	1,836
Bala district.......	64.15	437	71.11	.21	71.32	507	1	508
System R.P.D.'s....	115.38	590	167.30	.10	167.40	814	11	825
EASTERN ONTARIO SYSTEM								
Central district.....	1,957.37	11,884	2,421.45	66.77	2,488.22	13,829	283	14,112
St. Lawrence district	689.75	3,876	925.21	73.09	998.30	4,771	214	4,985
Rideau district.....	178.28	1,021	261.49	.80	262.29	1,300	41	1,341
Madawaska district.	51.75	331	136.07	3.79	139.86	1,029	10	1,039
Ottawa district.....	235.15	1,545	245.64	7.53	253.17	1,647	20	1,667
THUNDER BAY SYSTEM	119.04	594	192.50	24.62	217.12	800	91	891
MANITOULIN R.P.D...	67.53	261	96.09	0	96.09	462	0	462
NORTHERN ONTARIO PROPERTIES								
Nipissing district...	29.74	554	40.50	4.90	45.40	641	30	671
Sudbury district....	0	0	11.77	0	11.77	772	0	772
Totals.......	15,035.76	97,409	17,706.25	460.25	18,165.50	111,521	1,626	113,157

SECTION VII

TESTING—RESEARCH—INSPECTION

PRODUCTION AND SERVICE

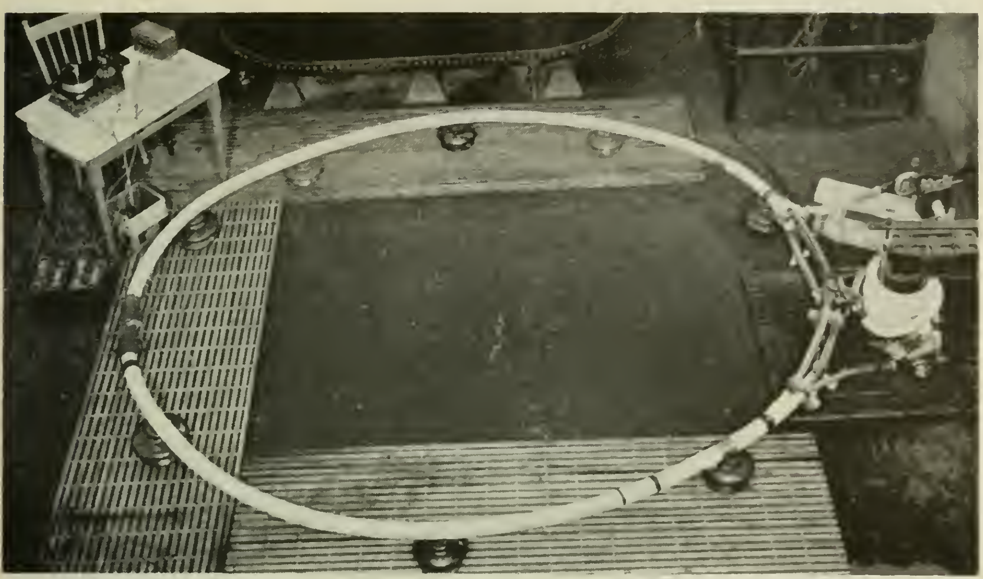
THE work of the Laboratories of the Commission has been described in detail in previous Annual Reports. Its chief branches comprise: testing, inspection and checking material and equipment; research work along practical lines through research sub-committees to develop new ideas, to improve characteristics of materials and equipment and to reduce costs; examination and testing of devices and fittings to ensure public safety, particularly against fire and shock, the issuance of Approval certificates for their sale, and the inspection of electrical installations in industrial, commercial and residential premises. Under the supervision of the head of the department also are operated a photographic and blue-printing department and a production and service department, with machine shop, carpenter shop and garage. The Commission maintains a fleet of more than 300 trucks, chiefly in connection with its operating and rural service divisions. These trucks are regularly and systematically inspected and repaired.

On the following pages are given brief references to the more important items of routine and special research work carried out and a short summary of other work under the care of the Laboratories. It will be appreciated that no adequate report of the work of the Laboratories can be given in the limited space available in the Commission's Annual Report.

TESTING AND RESEARCH LABORATORIES

Routine and General Testing

The Laboratories have carried out an unusually large amount of routine testing and inspection on numerous devices, equipment and materials submitted. This work is done to assist municipal utilities and also to insure the highest quality in material and workmanship in the Commission's purchases.



SKIN EFFECT MEASUREMENTS
Measuring the skin effect factor on large electrical cables

Electrical and mechanical equipment is inspected at the manufacturers' plants to insure that it has the desired characteristics and that materials and fabrication are satisfactory. Other equipment or devices are given routine tests at the Laboratories and these may lead to deeper investigations and studies according to the proportion of rejections necessary.

Materials and Equipment Inspection

Transmission Line Materials

The usual inspection of transmission line materials handled by Strachan Avenue stores was continued. This included clamps of various types, ground rods, insulator pins and brackets, cross arms, general line hardware, wire and cable. The copper wire, steel reinforced aluminum and galvanized steel cable inspected amounted to 2,685 tons, an increase of 22 per cent over last year.

Electrical Equipment

Factory inspection covered one 6,000-kv-a generator, and 139 power transformers of various ratings, having total capacity of 181,970-kv-a. Distribution transformers to the number of 9,090 were inspected, also 10 oil circuit breakers, total capacity 288,900-kv-a, 5,475 disconnecting switches of various types, totalling 1,579,800-kv-a and about 330,000 line and bus insulators. A large amount of metal-clad switchgear equipment was inspected for municipal utilities and for a new pumping plant. Inspection also covered eleven synchronous and induction type pump motors, with total rating of 7,900 horsepower.

In the Laboratories, routine tests were made on 5,280 linemen's rubber gloves, 2,500 samples of insulating oil, more than 2,600 instrument and distribution transformers, 1,400 insulators and about 26,000 fuse links. A total of 5,625 watt-hour meters were repaired and checked, and about 200 indicating instruments were calibrated.

Mechanical Equipment

One 7,500 horsepower Kaplan type adjustable blade hydraulic turbine was inspected at the manufacturer's plant. This is for installation at Ear Falls to drive the 6,000-kv-a generator. In addition, a large number of miscellaneous items of power plant equipment including sluice gates, rack structures and a gantry crane were inspected for the same development. Numerous other items of equipment for use at various plants and stations also were inspected.

Concrete

A resident concrete inspector was stationed at Ear Falls development during construction work. His duties there were the testing of aggregates, supervising manufacturing processes and generally checking the quality of the concrete.

Field inspections of five structures in service were made for the purpose of observing the condition of the concrete and noting the progress and extent of any deterioration.

Paint

A total of 339 samples of paints, together with other protective coatings, were tested for quality. A large number of petroleum products were analyzed and tests were made on metals, alloys, concrete ingredients and miscellaneous organic and inorganic materials for various uses.

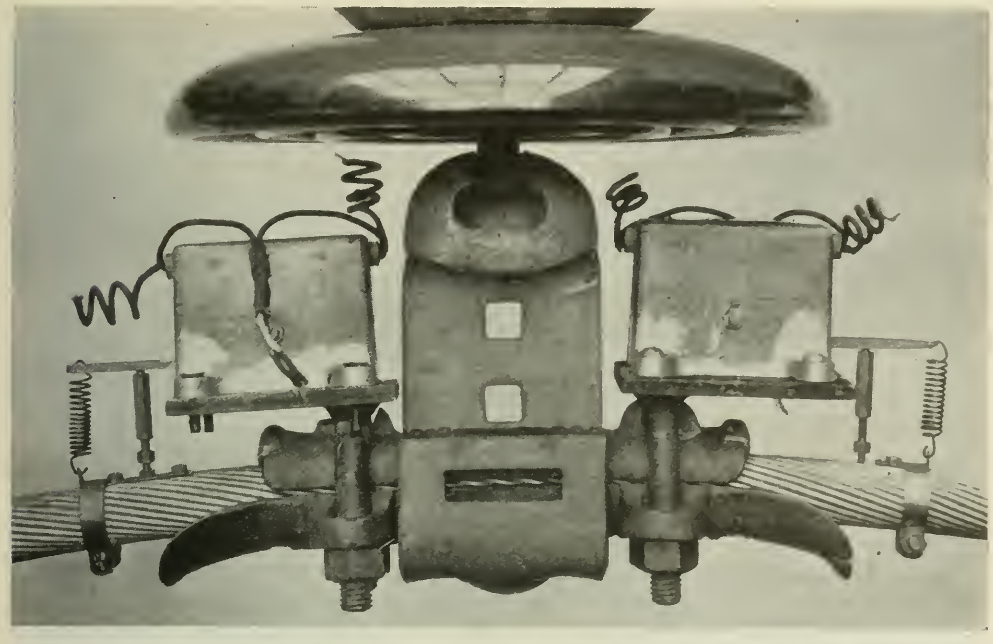
Steel and Timber

A total of 525 tons of steel was inspected, about half of this being reinforcing steel. The number of pine and cedar poles inspected amounted to about 10,000, nearly 20 per cent of which had to be rejected on account of various defects.

Lamps and Lighting Equipment

The number of lamps tested at the factory, 78,700, and the quantity, 3,887, given life tests at the Laboratory, represent increases of twenty per cent over last year. The lamps stamped at the factory reached a total of 740,700. Some special lamps also were tested. About forty candle-power-distribution tests were made and sixteen foot-candle meters were calibrated.

Miscellaneous equipment checked and tested included safety glass, reflex signals and automatic lighting devices. A large number of gloss measurements were made on paints.



VIBRATION INVESTIGATION ON TRANSMISSION LINES
A new magnetic transfer device used with the oscillograph in recording amplitude and frequency of conductor vibrations

Research

Research work is carried on by studies and investigations in both laboratory and field to determine the quality of materials which the Commission proposes to use, to develop new equipment and methods of applying electrical power, and to improve the existing equipment or methods wherever possible.

Vibration of Transmission Line Conductors

The problem of vibration in power line conductors was actively pursued, and substantial progress was made.

In the field studies, new recording equipment, developed by a member of the staff, proved of great value both in rating the performance of vibration dampers and in investigating the intensity of stress at points of conductor attachment. Further studies of the torsional damper were made and conclusive data were obtained showing that these dampers effectively suppress vibration on both short and long span construction.

The investigation of the endurance characteristics of conductor materials was continued, complete information being obtained on the fatigue limits and other physical properties of three grades of galvanized steel ground wire. Tests also were made to determine the effect of low atmospheric temperatures on the impact resistance of these materials. A limited amount of work was done towards investigating the endurance of steel wire in the stranded condition, and comparative tests were made on full size steel-reinforced aluminum cables.

Electrical Insulation

A large number of gradient tests were made on transformer and oil-switch bushings in service; the tests show that about three per cent of these bushings have incipient faults. Their replacement before actual failure occurred probably prevented many service interruptions. Very satisfactory results were obtained in metallizing suspension insulators to prevent radio interference. Pin digestion and the mechanism of cable failure were studied with a certain amount of investigation.

Rural Applications of Electricity

The study and development of a new type of grain grinder were carried on during the year to determine the possibility of adapting this type of grinding to small farm units. This covered investigation of screens, knives, speeds, power requirements and feed methods.

In co-operation with the Ontario Agricultural College at Guelph, electric soil heating was again used to grow an experimental crop of cucumbers. The method was modified so that a smaller number of plants produced a crop equal to that of the previous year. Studies in the application of light to plant growth were continued with typical varieties of plants.

Applications of Electronics

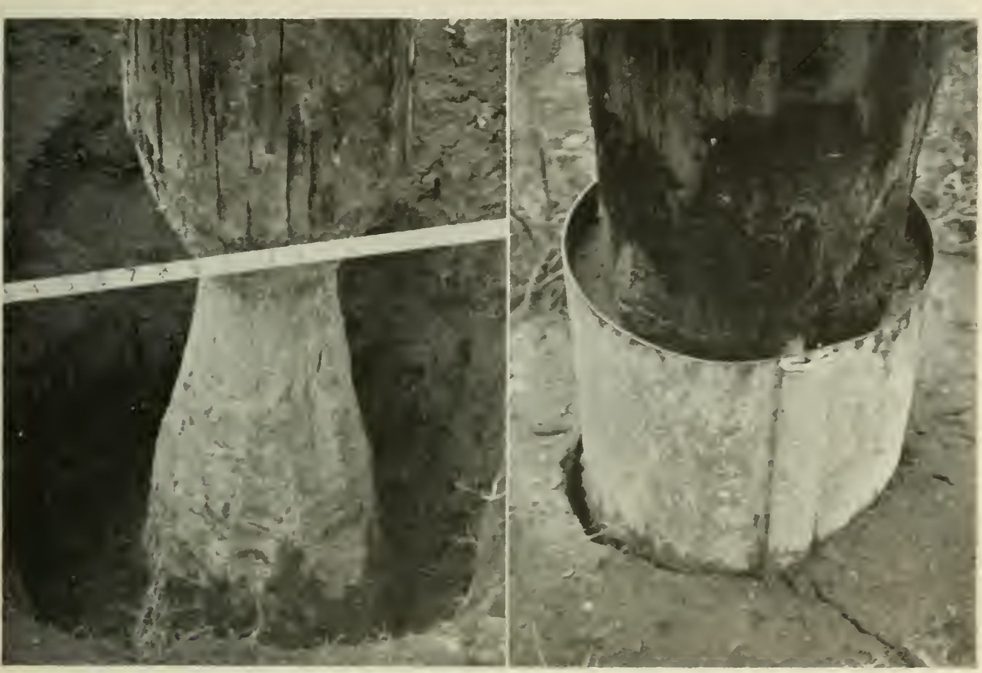
Proposed carrier equipment for communication along the power conductors between Beauharnois and Chats Falls generating stations was studied and field tests were made on the actual power line. The application of protective relaying to this carrier channel has also been investigated and discussed in detail with the Beauharnois Light, Heat and Power Company at several conferences.

Water Treatment

The corrosion in domestic electric hot water tanks is being investigated using a number of tanks of different materials and set up under service conditions in a location where the water is more than usually corrosive. The results obtained up to the present show noticeable variation in the action of the water on the different elements and tank walls. It is expected that this investigation will determine the true cause and other characteristics of the corrosion found in domestic tanks.

Electric Welding

Investigations were made toward standardizing welding materials and the technique used on work for the Commission. The characteristics of weld metal were studied and also the advantages of stress relieving. The welding engineer has instructed manufacturers in proper welding technique in order to insure the highest quality in the equipment.



SPLIT CYLINDER POLE REINFORCING AND TREATING UNIT

Used to strengthen wood poles which have deteriorated at the ground line. Left—pole prepared for treatment. Right—reinforcing completed: specimen under horizontal strain test

Paint

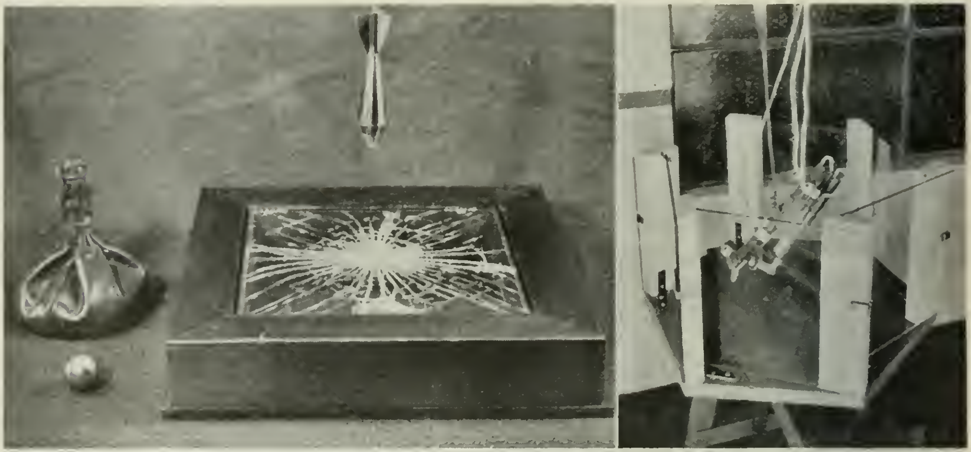
Research studies have included suitable paints for under-water exposure and several different types were tested. Analyses and comparative weathering tests were made on thirteen different brands of house paint, five of which have been in use by the Commission, and others were standard brands on the market or special formulated paints. Several houses were painted for field observation.

A large amount of work was done on a special glazed coating for both interior and exterior finishes on walls and floors and for certain repair work.

Masonry Materials

Attention has been given to problems relating to concrete, brick, and other materials used in masonry construction. A concerted effort was made in both laboratory and field to find methods of producing concrete of more durable quality.

Further investigations on repair methods for concrete were started in order that the Commission's engineers may be reliably informed as to the best method to use for various classes of work. A number of existing concrete structures were examined, including eight structures which are not the property of the Commission.



THE TESTING OF SAFETY GLASS

Left — Impact Tests,—the ball, shot bag and dart are dropped freely from specified heights on the samples set in the frame. A sample, after test, is shown in position.

Right—Discoloration Tests,—samples are submitted to ultra violet rays for given periods. The frame is rotated, and samples cooled by means of a fan.

The study of water movements through concrete has been continued in an attempt to establish some relation between the compressive strength of concrete and the loss in its chemical constituents as brought about by water percolation.

An investigation of the deterioration of cement in storage was started during the year.

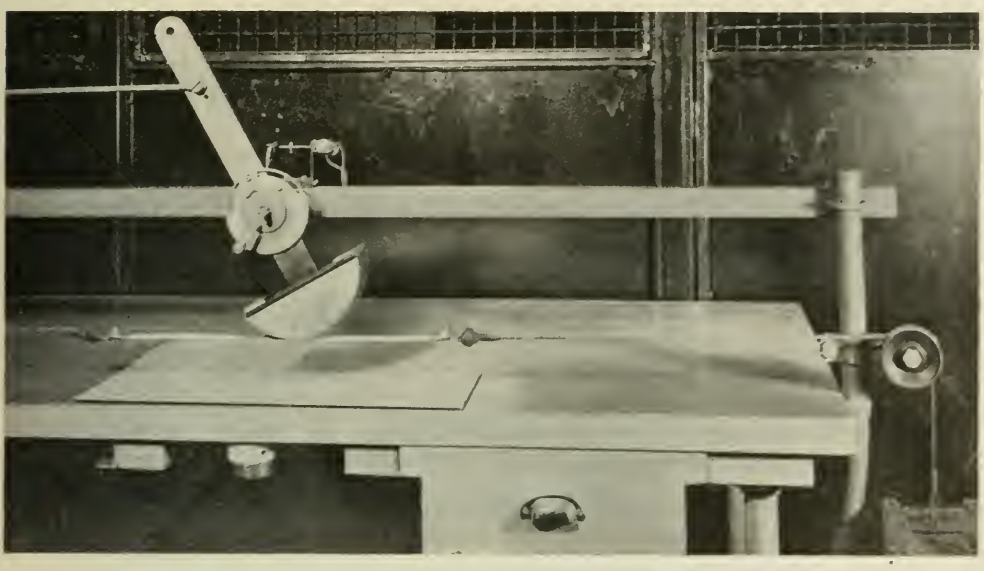
Treatment of Wood Transmission Structures

The deterioration of wood poles and methods for their preservation have received a large amount of attention. The work also has broadened to include studies of other phases of pole life such as reduction in strength with service, new methods of reinforcing poles, new types of poles, and the preparation of specifications for purchase of poles and timber for transmission structures.

The butt treatment of poles using the sand creosote collar has been applied extensively and the results of the treatment are being investigated. With the completion of tests on a new split-cylinder pole-reinforcing and treating unit, installations have been made on about 710 poles, including both direct reinforcing and ground-line splicing. Tests are being continued on the strength of poles that have been in service for relatively long periods.

Petroleum Products

Special investigations have been carried out on petroleum products and related materials. Tests were made on used lubricating oil at Queenston generating station to determine the extent of deterioration with a view to



ABRASION TESTING OF INSULATED WIRES
As the arm oscillates, emery cloth on the curved block wears off the insulation.

establishing proper procedure for refining a large quantity of this oil when it becomes necessary. Generator oils have been studied and tested for film strength and coefficient of friction. Comparative tests were made on automobile car filters, and the technique of testing filter paper was investigated.

Miscellaneous Research

Investigations were made to determine the merits of hot plates and the characteristics of a thermal storage electric cooker, and also as part of the study of some water heater and thermostat problems. Methods of joining aluminum transmission conductors were studied with special attention to materials for sealing contacts against oxidation. The reduction of high ground resistances and the use of the earth-leakage relay switch also were given consideration. A peak wattmeter was developed for checking maximum demand on spot welders.

New Equipment

An abrasion tester was built and is now in use in testing insulated wire.

A reactor was purchased for the Approvals Laboratory to be used in testing industrial control equipment at low power factor, and a device was built for use in testing switches actuated by gas pressure.

Equipment was built for discoloration tests on safety glass in which samples are submitted to ultra-violet rays.

The new portable oscillograph, ordered last year, was received and has been used in a number of laboratory and field investigations.

A Ferris portable combined radio noise and field strength meter was purchased for measurement of radio interference from power lines and also from devices submitted for approval.

Specifications and Committee Work

Members of the staff attended meetings and conventions of the Canadian Engineering Standards Association, National Research Council, American Society for Testing Materials, American Concrete Institute, Association of Municipal Electrical Utilities, Engineering Institute of Canada, Canadian Electrical Association, American Institute of Electrical Engineers, National Fire Protection Association, Radio Manufacturers Association and Ontario Electrical Contractors Association.

APPROVALS LABORATORY

The number of applications for approval increased about ten per cent. The increase was more marked in classes of wiring devices, industrial control devices, and radio, sound and picture appliances. It was not a great increase in the use of any one appliance but rather general development of new models.

The number of factory inspection reports was larger, and the quantity of labels sold for cord, wire cable and conduit increased.

Inspection and Testing of Wire, Cable and Conduit

A total of 672 factory inspections of wiring materials was made and 1,298 inspection reports were issued to manufacturers. These figures are respectively, 15 per cent and 11 per cent higher than those of the previous year. The quantities of insulated wire, heat-resisting fixture wire, armoured cable and non-metallic sheathed cable inspected showed large increases, 20 to 31 per cent. Also, larger amounts of Christmas tree wire and rigid steel conduit were inspected.

The quantities of heater cord and flexible non-metallic tubing did not show any increase and there was a noticeable reduction in flexible steel conduit.

PRODUCTION AND SERVICE DEPARTMENT

The operations of the machine shop, carpenter shop and garage continued on a satisfactory basis. The volume of work done, though somewhat less than in the previous year, was approximately equal to that of two years before.

The machine and carpenter shops completed a total of 1,721 orders, and other departments were assisted in the development of new types of apparatus.

The garage was operated along lines similar to those followed in recent years. The policy of regularly and systematically inspecting the Commission's fleet of 309 trucks was continued. Thirty-three trucks were completely overhauled in the garage and 1,346 individual inspections were made in the field. In addition, 186 orders for miscellaneous repairs were completed.

Fifty-six new trucks were purchased, 29 of which were replacements and the remaining 27 were additions to the fleet. A new type of all-steel truck body, specially designed for convenience in meter reading and installation of rural services, was adopted as standard. This design provides adequate facilities for carrying 16 watthour meters, materials and equipment, and replaces the pick-up and panel bodies previously used for this purpose.

A new two-ton combination type trailer, equipped with electric brakes, was developed for the dual purpose of hauling poles and carrying reels of cable. It is so designed that the reels may easily be loaded directly from the ground level without the use of other lifting equipment.

PHOTOGRAPHY, PHOTOSTAT AND BLUE PRINTING

There was a definite increase in the amount of work done in photography, photostat and blue printing. A total of 779 photograph orders was completed, about six per cent increase. The number of blue prints made was 93,227, an increase of eleven per cent.

The photostat camera has been used to a much greater extent, the orders completed, 550, show an increase of thirty-six per cent. The number of positive prints was over fifteen per cent higher, and indicated an increasing preference for this type instead of the negative print.

ELECTRICAL INSPECTION DEPARTMENT

This department handled the largest volume of work for any year since it was organized, but the amount was only slightly more than in the previous year.

Statistical

A total of 119,578 permits was issued, an increase of 1.6 per cent over 1938, and 208,388 inspections were made, an increase of 2.3 per cent.

Fires Attributed to Electricity

Among the fires investigated, after having been reported as caused through electrical wiring or equipment, ten were traced to that source. These were found due to loose ground clamps, loose connections at the meter, or short-circuits in armoured cable, flexible cord or knob and tube wiring. Possibly other fires had their origin in electrical circuits or equipment but the evidence available to the Commission's inspectors did not entirely warrant such a conclusion.

Electrocutions and Fatal Accidents

Seven persons lost their lives through coming into contact with electric wiring or equipment under the jurisdiction of this department. Of these, five were electrocuted in such positions as (a) holding a metal tray which had cut through the insulation of a portable cable, (b) handling a portable lamp while in a bathtub, (c) in contact with a power feeder within reach above a roof, (d) in contact with the bumper of a car which was alive due to a defective battery charger, and (e) while wiring a live control panel. One man died from burns when an oil can caused a short circuit and exploded. Another suffered a broken neck in a fall caused by shock while investigating supposed trouble in an oil switch.

Ground Tests

Ground tests, made in isolated communities and rural districts, reached a total of 5,539.

Infractions of Regulations

Fifty-four persons and companies were prosecuted for various infractions of the Rules and Regulations governing the installation and sale of electrical equipment and material. This was a considerable reduction in prosecutions, —thirty-two less than in the previous year.

The Canadian Electrical Code

Members of the Laboratory and Electrical Inspection staffs attended several meetings and assisted in revising sections of the Code.

On Part I of the Code—Electrical Installations—nine meetings were attended by the Commission's engineers in connection with the preparation of material for the fourth edition of the Code. This material had been prepared in draft form mainly in the preceding fiscal year but was reviewed for revision and acceptance by the various committees of the Canadian Engineering Standards Association. The Code was issued late in the year.

On Part II of the Code—Approval Specifications for Electrical Equipment.—Nineteen meetings of different committees and subcommittees were held. These were attended by several of the Commission's engineers. Two specifications, on "Knife Switches" and "Flexible Steel Conduit", were completed and printed by the Canadian Engineering Standards Association. Six other specifications were advanced to the preliminary draft stage, one to C.E.S.A. draft and four to letter ballot.

With the reorganization of the Canadian Electrical Code Committee, the Panel on Specifications became the Committee on Part II of the C.E. Code, with the Approvals engineer as chairman. Subcommittees were appointed, each under the chairmanship of a member of the Part II Committee, and with secretaries appointed from the Laboratory staff. Under this new arrangement, much of the work of preparing the specifications and guiding them through the various stages to completion devolves upon the Approvals Laboratory. As the above programme of the year's work shows, this Committee and its subcommittees have been quite active.

SECTION VIII

ELECTRIC RAILWAYS

THE HAMILTON STREET RAILWAY COMPANY

A Subsidiary of The Hydro-Electric Power Commission of Ontario—Niagara System

Gross earnings on the Hamilton Street Railway for the year 1939 decreased 4.59 per cent. Operating expenses (including taxes) decreased 7.64 per cent. The result was a decrease in net earnings of $49,511. The decrease in net earnings was due to general industrial conditions.

The balance sheet and income account are given at the end of Section IX.

Operating results are summarized and compared in the following tabulation and chart.

HAMILTON STREET RAILWAY

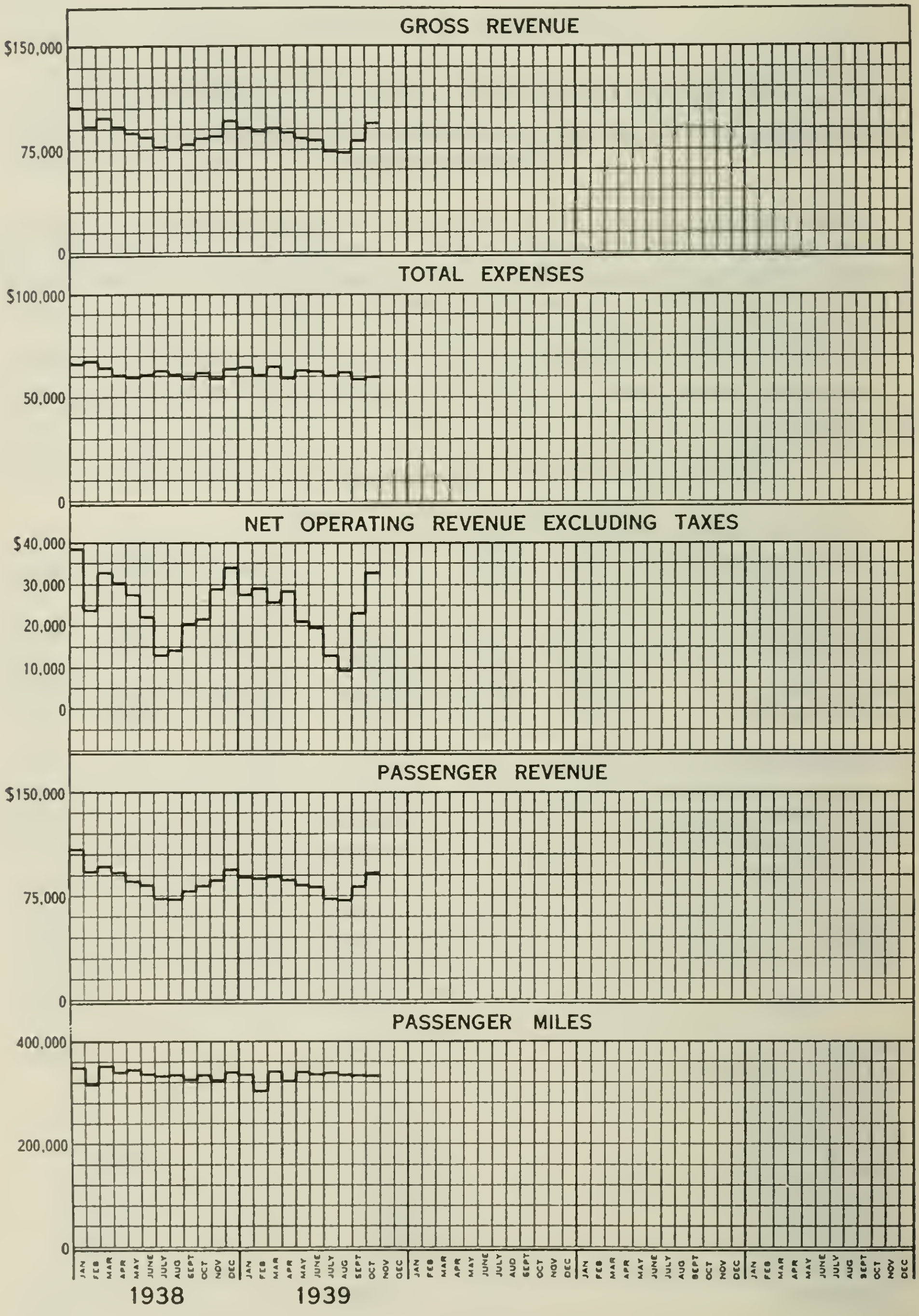
Comparative Operating Statistics

	1938			1939		
	Street-cars $	Buses $	Total $	Street-cars $	Buses $	Total $
Operating revenues:						
Transportation	840,588	231,602	1,072,190	788,652	229,938	1,018,590
Other operations	4,854	825	5,679	9,094	674	9,768
Operating revenue	845,442	232,427	1,077,869	797,746	230,612	1,028,358
Operating expenses	735,502	186,780	922,282	661,465	190,376	851,841
Net revenue for year	109,940	45,647	155,587	136,281	40,236	176,517
Appropriation for dividend			122,969			177,228
Surplus for year			32,618			*711

*Deficit.

	1938	1939
Route-miles:		
Street-car	28.06	28.38
Bus	17.58	16.57
Total	45.64	44.95
Track-miles	42.80	42.62
Passenger cars operated:		
Passenger cars	72	70
Passenger buses	32	34
Car-miles operated:		
Passenger cars	2,722,581	2,562,074
Passenger buses	1,330,301	1,393,242
Car-hours operated:		
Passenger cars	291,650	272,149
Passenger buses	108,291	111,242
Passengers carried	20,007,750	19,027,851
Percentage of transfer passengers to revenue passengers	23.9%	19.6%

THE HAMILTON STREET RAILWAY COMPANY
OPERATING STATISTICS



SECTION IX

FINANCIAL STATEMENTS

Relating to

Properties Operated by The Hydro-Electric Power Commission in the Niagara, Georgian Bay, Eastern Ontario and Thunder Bay Systems on Behalf of Municipalities

and to

Northern Ontario Properties Held and Operated by the Commission in Trust for the Province of Ontario, and

The Hamilton Street Railway Company—A Subsidiary of Niagara System

IN this section of the Report financial statements relating to the activities of The Hydro-Electric Power Commission, segregated into certain distinct divisions, are presented. The first division relates to those activities on behalf of the co-operative municipalities, which are partners in the main "Hydro" undertaking comprising the Niagara, Georgian Bay, Eastern Ontario and Thunder Bay systems and certain minor properties. The second relates to the administration of the Northern Ontario Properties which are held and operated by the Commission in trust for the Province of Ontario. The third relates to The Hamilton Street Railway Company, a subsidiary of the Niagara system.

Co-operative Systems

In the Foreword to this Report a brief reference is made to the basic principle governing the operations of the "Hydro" undertaking in supplying electrical service at cost, and to the *wholesale* and *retail* aspects of the work. A description is also given of the several systems into which the partner municipalities are co-ordinated for securing common action with respect to power supplies, through the medium of The Hydro-Electric Power Commission which, under The Power Commission Act, functions as their Trustee.

Although for the purpose of financial administration the various systems are separate units, there is a similarity of procedure with respect to their operation which enables certain financial statements, as for example the various reserves, to be co-ordinated and presented in summary tables.

The first set of tables in Section IX gives collective results for the co-operative activities related to the four systems and minor associated properties. These tables include a **balance sheet; a statement of operation and cost distribution** as detailed in the "cost of power" tables referred to below; schedules respecting **fixed assets, capital expenditures and grants—rural power districts, power accounts receivable, funded debt issued or assumed, renewals reserves, contingencies and obsolescence reserves, stabilization of rates reserves, sinking fund reserves** and the **account with the Provincial Treasurer of the Province of Ontario.**

The tables which follow these general financial statements relate more particularly to the individual municipality's aspects of the wholesale activities of the Commission and for each system show the **cost of power** to the individual municipal utilities, the **credit or debit** adjustment that is made at the end of the fiscal year, and the **sinking fund** equity that has been acquired by the individual municipality. There is also included for each system a **rural operating** statement.

The charges for power supplied by the Commission to the various municipalities vary with the amounts of power used, the distances from the sources of supply and other factors. The entire capital cost of the various power developments and transmission systems is annually allocated to the connected municipalities and other wholesale power consumers, according to the relative use made of the lines and equipment. Each municipality assumes responsibility for that portion of property employed in providing and transmitting power for its use, together with such expenses—including the cost of purchased power if any—as are incidental to the provision and delivery of its wholesale power. The annual expenses and the appropriations for reserves are provided out of revenues collected in respect of such power, through the medium of power bills rendered by the Commission. The municipalities are billed at an estimated interim rate each month during the year and credit or debit adjustment is made at the end of the year,* when the Commission's books are closed and the actual cost payable by each municipality for power taken has been determined.

Included in the municipality's remittance to the Commission for the wholesale cost of power—besides such current expenses as those for operation and maintenance of plant, for administration, and for interest on capital—are sums required to build up reserves for sinking fund, for renewals, for contingencies and obsolescence, and for stabilization of rates. The first-mentioned reserve, namely, sinking fund, is being created on a 40-year basis for the purpose of liquidating capital liabilities. The other reserves are, respectively, being created to provide funds for the replacing or rebuilding of plant as it wears out, to enable the undertaking to replace existing equipment with improved equipment as it becomes available through advances in science and invention, and to meet unforeseen expenses which from time to time may arise.

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*The financial year for the Commission ends on October 31. The financial year for the municipal electric utilities, however, ends on December 31, and the municipal accounts are made up to this date, and so recorded in Section X.

The ultimate source of all revenue to meet costs—whether for the larger operations of The Hydro-Electric Power Commission or for the smaller local operations of the municipalities—is, of course, the consumer. Out of the total revenue collected by each municipal utility from its consumers for service supplied, only an amount sufficient to pay the wholesale cost of power supplied by the Commission as outlined above is remitted to the Commission; the balance of municipal electrical revenue is retained to pay for the expense incurred by the local utility in distributing the electrical energy to its consumers.

Tabular Data

The following comments relate to the tabular data presented:

Balance Sheet.—The first tabular statement given in Section IX is a balance sheet showing the assets, and the liabilities of the several co-operative systems.

Statement of Operation and Cost Distributions.—This statement is a summary of operating expenses and fixed charges as shown in the "cost of power" tables relating to the individual systems as referred to more particularly below.

Fixed Assets.—Details are given concerning the various fixed assets of each system and of the miscellaneous properties, whilst similar details are shown of the capital expenditures for the year ended October 31, 1939.

Capital Expenditures and Grants—Rural Power Districts.—This schedule gives summary information respecting the total capital expenditures on rural power districts and grants-in-aid of construction paid or payable by the Province with respect to such rural districts.

Power Accounts Receivable.—This schedule sets forth the amounts collectable from all classes of power consumers and includes the annual adjustment figures from the "credit or charge" statements for municipalities. The main details of those debit balances three months or more overdue are stated.

Funded Debt Issued or Assumed.—This schedule presents a complete list of the securities issued or assumed by the Commission on account of the several systems, and the Northern Ontario Properties. It should be noted that where securities have been issued to finance properties operated for others, this liability is only shown in memorandum form on the balance sheet of the Commission, whilst the direct liability is shown on the balance sheets of the Northern Ontario Properties.

Renewals Reserves,

Contingencies and Obsolescence Reserves and

Stabilization of Rates Reserves.—These schedules show the provisions made to, the expenditures from, and the balance to the credit of, these reserves for each of the systems and other properties included in the power undertakings operated on a cost basis.

Sinking Fund Reserves.—This schedule summarizes the appropriation of principal and interest with respect to these reserves for each of the systems and certain minor properties.

Account with the Provincial Treasurer.—This schedule lists, both for the Niagara and other systems operated on a cost basis, and for the Northern Ontario Properties which are held and operated by the Commission in trust for the Province, the advances from the Province of Ontario and the repayments which have been applied to reduce this liability. It should be noted that Provincial advances to finance Northern Ontario Properties are shown in memorandum form only on the balance sheet of the Commission as the direct liability is carried on the Northern Ontario Properties' balance sheet.

Following these statements, which are common to all systems, there are given for each of the individual co-operative systems four tabular statements as follows:

Cost of Power statement, which shows the apportionment to each municipality of the items of cost summarized in the operating account, as well as the apportionment of fixed assets in service listed in the balance sheet and the amount of power taken by each municipality. It should be noted that the cost of power given in this table is the wholesale cost—that is, the cost which the Commission receives for the power delivered from the main transformer stations serving the local utility. In the case of municipal electrical utilities not directly administered by the Commission, the respective costs of power appear in Statement "B" of Section X as "power purchased".

Credit or Charge statement, which shows the adjustments made in order to bring the amounts paid by each municipal electric utility to the actual cost of service. The credits and charges for the municipal electric utilities are taken up and given effect to in the accounts of "Hydro" utilities.

Sinking Fund statement, which gives the accumulated total of the amounts paid by each municipality as part of the cost of power together with its proportionate share of other sinking funds.

Rural Operating statement, which summarizes for the rural power districts of the system the various items of cost, and the revenues received, in connection with the distribution of electrical energy to rural consumers.

Northern Ontario Properties

The statements and schedules respecting these properties which are held and operated by the Commission in trust for the Province of Ontario include the balance sheet, operating and income accounts, schedules of fixed assets, renewals reserves, contingencies and obsolescence reserves, and sinking fund reserves. These schedules are similar in form to the corresponding schedules relating to the co-operative systems.

The Hamilton Street Railway Company

This is a subsidiary of the Niagara system of the Commission. A balance sheet and operating and income account are presented.

Municipal Utilities

All municipal "Hydro" utilities have current expenses to meet similar to the expenses of the Commission and have adopted the same financial procedure with respect to their operations. In other words, concurrently with the creation of funds to liquidate their debt to the Commission and to provide the necessary reserves to protect generating, transforming and transmission systems, the municipalities are taking similar action with respect to their local "Hydro" utility systems.

The balance sheets, operating reports and statistical data appearing in Section X, under the heading of "Municipal Accounts", relate to the operation of local distribution systems by individual municipalities which have contracted with the Commission for their supply of electrical energy. To this section there is an explanatory introduction to which the reader is specially referred.

Auditing of Accounts

The accounts of The Hydro-Electric Power Commission of Ontario are verified by auditors specially appointed by the Provincial Government. The accounts of the "Hydro" utility of each individual municipality are prepared according to approved and standard practice and The Public Utilities Act requires that they shall be audited by the auditors of the municipal corporation.

THE HYDRO-ELECTRIC POWER COMMISSION OF ONTARIO

FINANCIAL ACCOUNTS

For the Year Ended October 31, 1939

Relating to Properties operated on a "Cost Basis" for the Co-operating Municipalities and Rural Power Districts which are supplied with Electrical Power and Services from the following Properties:

- Niagara System
- Georgian Bay System
- Eastern Ontario System
- Thunder Bay System
- Non-System Properties
- Service and Administrative Buildings and Equipment

STATEMENTS

Balance Sheet as at October 31, 1939

Statements of Operations and Cost of Power for the Year ended October 31, 1939.

Schedules supporting the Balance Sheet as at October 31, 1939:

- Fixed Assets—By Systems and Properties
- Capital Expenditures and Grants—Rural Power Districts
- Power Accounts Receivable
- Funded Debt Issued or Assumed
- Renewals Reserves
- Contingencies and Obsolescence Reserves
- Stabilization of Rates Reserves
- Sinking Fund Reserves
- Account with the Provincial Treasurer of the Province of Ontario

Statements for Municipalities Receiving Power under Cost Contracts

THE HYDRO-ELECTRIC POWER

BALANCE SHEET AS AT OCTOBER 31, 1939,

Niagara System Georgian Bay System

ASSETS

FIXED ASSETS:			
Niagara system		$225,300,674.10	
Georgian Bay system		13,773,078.28	
Eastern Ontario system		26,336,955.79	
Thunder Bay system		20,105,059.65	
Non-system properties		414,320.48	
Service and administrative buildings and equipment		3,267,086.38	
		$289,197,174.68	
Less: Grants-in-aid of construction:			
Province of Ontario—for rural power districts		16,596,670.63	$272,600,504.05
INVESTMENTS:			
Toronto, Port Credit, St. Catharines Radial Railways—secured		$2,201,775.47	
The Hamilton Street Railway Company—Capital stock		3,000,000.00	
City of Toronto debentures (Toronto and York Radial)—Collateral		2,375,000.00	
Other investments		213,117.00	
			7,789,892.47
CURRENT ASSETS:			
Cash in banks		$ 1,279,262.99	
Employees' working funds		77,465.43	
Sundry accounts receivable		477,186.78	
Power accounts receivable		4,155,172.73	
Rural power district grants receivable		436,562.53	
Interest accrued		658,608.38	
Consumers' and contractors' deposits:			
Cash deposits	$ 51,255.05		
Securities—at par value	515,200.00		
		566,455.05	
Prepayments		32,097.23	
			7,682,811.12
INVENTORIES:			
Construction and maintenance materials and supplies		$ 2,374,258.86	
Construction and maintenance tools and equipment		901,163.02	
Office equipment		104,530.07	
			3,379,951.95
DEFERRED ASSETS:			
Agreements and mortgages		$ 856,672.91	
Rural district loans		115,612.17	
Work in progress—deferred work orders		106,785.07	
			1,079,070.15
UNAMORTIZED DISCOUNT ON DEBENTURES			404,085.07
RESERVE FUNDS:			
Investments—Specific reserves		$ 48,465,593.42	
Employers' Liability Insurance Fund:			
Investments	$ 977,285.44		
Deposits with the Workmen's Compensation Board	33,942.18		
		1,011,227.62	
Pension Fund, investments		5,956,591.79	
			55,433,412.83
SINKING FUNDS:			
Investments		$ 315,995.24	
Deposits in the hands of trustees—including temporary investments		448,763.28	
			764,758.52
			$349,134,486.16

COMMISSION OF ONTARIO

IN WHICH THE FOLLOWING PROPERTIES ARE INCLUDED:

Eastern Ontario System **Thunder Bay System** **Non-System Properties**

LIABILITIES AND RESERVES

LONG TERM LIABILITIES:			
Funded Debt Issued or Assumed		$111,624,036.33	
Less—Debentures issued to finance Northern Ontario Properties		29,500,000.00	
		$ 82,124,036.33	
Advances from the Province of Ontario	$146,563,260.91		
Less—Advances for Northern Ontario Properties	6,223,284.82		
		140,339,976.09	
Purchase Agreements:			
Thunder Bay system transmission lines		148,152.97	
			$222,612,165.39
CURRENT LIABILITIES:			
Bank of Montreal—short term loans—secured		$ 3,000,000.00	
Accounts and payrolls payable		1,973,936.39	
Northern Ontario Properties—Current account		54,888.33	
The Hamilton Street Railway Co.—Current account		10,962.01	
Power accounts—credit balances		24,150.95	
Advances from the Province of Ontario for rural loans		125,240.87	
Consumers' and contractors' deposits		570,987.47	
Debenture interest accrued		904,570.87	
Miscellaneous interest and exchange accrued		98,604.62	
Miscellaneous accruals		33,883.86	
			6,797,225.37
RURAL POWER DISTRICTS—Rates Suspense, net			1,251,611.30
UNAMORTIZED PREMIUM ON DEBENTURES			108,666.91
RESERVES:			
Renewals	$ 43,501,707.11		
Contingencies and obsolescence	8,499,717.25		
Stabilization of rates	5,709,102.09		
Fire insurance	80,640.74		
		$ 57,791,167.19	
Employers' liability insurance		1,050,379.01	
Pension fund		6,084,974.20	
Miscellaneous		635,079.83	
			65,561,600.23
SINKING FUND RESERVE:			
Represented by:			
Funded debt retired through sinking funds		$ 22,767,209.46	
Provincial advances retired through sinking funds		29,265,262.01	
Available balance		770,745.49	
			52,803,216.96
			$349,134,486.16

Auditors' Certificate

We have examined the Accounts of The Hydro-Electric Power Commission of Ontario for the year ended the 31st October, 1939, and report that, in our opinion, the above Balance Sheet is properly drawn up so as to exhibit a true and correct view of the state of the Commission's affairs at the 31st of October, 1939, according to the best of our information and the explanations given to us, and as shown by the books and records of the Commission. We have obtained all the information and explanations we have required.

OSCAR HUDSON AND CO.,
Chartered Accountants,
Auditors.

Dated at Toronto, Ontario,
29th February, 1940.

THE HYDRO-ELECTRIC POWER

Statement of Operations and Cost of Power for

	Cost of power purchased	Operating maintenance and administrative expenses	Interest	Provision for renewals	Provision for contingencies and obsolescence
	$ c.	$ c.	$ c.	$ c.	$ c.
Niagara System:					
Municipalities	4,936,546.85	2,865,978.44	6,829,212.36	1,071,407.90	....
Rural power districts	304,060.28	259,987.66	500,997.65	93,964.99	....
Companies	1,528,467.31	903,282.97	1,783,366.88	240,047.69	....
Local distribution systems	31,641.79	71,672.85	61,811.45	11,841.54	....
Total	6,800,716.23	4,100,921.92	9,175,388.34	1,417,262.12	....
Georgian Bay System:					
Municipalities	16,929.83	313,353.26	329,528.84	86,334.05	26,722.86
Rural power districts	9,263.30	69,050.78	77,770.62	21,334.42	6,361.80
Companies	849.65	13,930.95	15,650.40	4,142.55	1,275.46
Local distribution systems	368.32	14,190.92	11,701.55	3,868.79	1,515.24
Total	27,411.10	410,525.91	434,651.41	115,679.81	35,875.36
Eastern Ontario System:					
Municipalities	772,442.08	523,669.81	630,295.84	144,663.47	47,314.92
Rural power districts	79,047.32	68,469.12	85,511.60	21,894.36	6,697.66
Companies	159,122.04	119,781.52	150,972.62	36,251.75	12,173.53
Local electric dist. system	3,355.43	9,180.09	5,556.52	1,551.34	308.69
Local gas dis. system	....	3,057.04	202.05	....	....
Pulp mill	10,104.53	21,273.25	12,973.27	1,964.00	773.35
Total	1,024,071.40	745,430.83	885,511.90	206,324.92	67,268.15
Thunder Bay System:					
Municipalities	....	180,093.24	558,857.32	105,344.16	55,996.81
Rural power districts	....	2,565.17	4,355.55	873.64	439.31
Companies and local distribution systems	....	178,020.29	353,899.71	53,140.81	30,077.05
Total	....	360,678.70	917,112.58	159,358.61	86,513.17
Cost of Distribution of power within R.P.D.'s:					
Niagara system R.P.D.	*1,253,633.83	716,779.89	452,129.91	198,134.37	....
Georgian Bay sys. R.P.D.	*219,499.28	131,276.84	95,848.87	38,889.57	....
Eastern Ontario sys. R.P.D.	*300,290.80	218,760.35	154,120.34	65,015.06	....
Thunder Bay sys. R.P.D.	*9,081.34	6,615.00	5,214.23	2,238.58	....
Manitoulin R.P.D.	6,439.97	6,098.94	3,742.64	1,642.49	....
Nipissing R.P.D.	10,971.00	3,804.83	2,509.08	1,019.14	....
Sudbury R.P.D.	8,596.70	5,761.79	1,178.47	589.24	....
Total	1,808,512.92	1,089,097.64	714,743.54	307,528.45	....
Rural Lines operated by Municipalities:					
Niagara rural lines	....	....	845.80	401.17	200.59
Georgian Bay rural lines	....	....	155.66	56.74	28.37
Total	....	....	1,001.46	457.91	228.96
Total for all systems	9,660,711.65	6,706,655.00	12,128,409.23	2,206,611.82	189,885.64
R.P.D.'s eliminations	*(1,782,505.25)	....	....	....	....
Net total for all systems	7,878,206.40	6,706,655.00	12,128,409.23	2,206,611.82	189,885.64
Grand Summary:					
Niagara system	6,800,716.23	4,817,701.81	9,628,364.05	1,615,797.66	200.59
Georgian Bay system	27,411.10	541,802.75	530,655.94	154,626.12	35,903.73
Eastern Ontario system	1,024,071.40	964,191.18	1,039,632.24	271,339.98	67,268.15
Thunder Bay system	....	367,293.70	922,326.81	161,597.19	86,513.17
Non-system properties	26,007.67	15,665.56	7,430.19	3,250.87	....
	7,878,206.40	6,706,655.00	12,128,409.23	2,206,611.82	189,885.64

COMMISSION OF ONTARIO
Each System for the Year ended October 31, 1939

Provision for stabilization of rates	Provision for sinking fund	Operating balances in respect of power sold to private companies	Total cost	Amount received from (or billed against) municipalities and other customers	Amounts remaining to be credited or charged to municipalities	
					Credited	Charged
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
....	1,591,311.73	(358,853.04)	16,935,604.24	17,118,446.64	303,170.42	120,328.02
....	116,820.86	(22,197.61)	*1,253,633.83	*1,253,633.83	....	....
....	466,235.71	382,720.07	5,304,120.63	5,304,120.63	....	....
....	14,413.00	(1,669.42)	189,711.21	189,711.21	....	....
....	2,188,781.30	....	23,683,069.91	23,865,912.31	303,170.42	120,328.02
76,785.90	73,477.63	5,033.92	928,166.29	943,896.67	27,103.52	11,373.14
17,321.10	17,261.78	1,135.48	*219,499.28	*219,499.28	....	....
....	3,473.72	(5,817.31)	33,505.42	33,505.42	....	....
....	2,597.24	(352.09)	33,889.97	33,889.97	....	....
94,107.00	96,810.37	....	1,215,060.96	1,230,791.34	27,103.52	11,373.14
157,430.80	142,148.18	(4,265.42)	2,413,699.68	2,423,716.34	29,836.33	19,819.67
19,965.20	19,246.47	(540.93)	*300,290.80	*300,290.80	....	....
....	40,762.48	15,533.66	534,597.60	534,597.60	....	....
....	1,149.80	7,293.11	28,394.98	28,394.98	....	....
....	....	(1,016.10)	2,242.99	2,242.99	....	....
....	2,375.78	(17,004.32)	32,459.86	32,459.86	....	....
177,396.00	205,682.71	....	3,311,685.91	3,321,702.57	29,836.33	19,819.67
24,078.15	126,266.41	(43,374.90)	1,007,261.19	1,012,926.43	5,872.23	206.99
170.75	984.51	(307.59)	*9,081.34	*9,081.34	....	....
21,909.64	162,600.07	43,682.49	843,330.06	843,330.06	....	....
46,158.54	289,850.99	....	1,859,672.59	1,865,337.83	5,872.23	206.99
....	105,426.10	....	2,726,104.10	2,834,782.69	108,678.59	....
....	21,274.34	....	506,788.90	449,428.70	....	57,360.20
....	34,688.55	....	772,875.10	766,209.79	....	6,665.31
....	1,178.61	....	24,327.76	23,211.36	....	1,116.40
....	900.18	....	18,824.22	16,532.26	....	2,291.96
....	540.49	....	18,844.54	21,202.12	2,357.58	....
....	310.23	....	16,436.43	24,721.24	8,284.81	....
....	164,318.50	....	4,084,201.05	4,136,088.16	119,320.98	67,433.87
....	361.05	....	1,808.61	1,808.61	....	....
....	51.07	....	291.84	291.84	....	....
....	412.12	....	2,100.45	2,100.45	....	....
317,661.54	2,945,855.99	....	34,155,790.87	34,421,932.66	485,303.48	219,161.69
....	....	....	*(1,782,505.25)	*(1,782,505.25)	....	....
317,661.54	2,945,855.99	....	32,373,285.62	32,639,427.41	485,303.48	219,161.69
....	2,294,568.45	....	25,157,348.79	25,448,869.78	411,849.01	120,328.02
94,107.00	118,135.78	....	1,502,642.42	1,461,012.60	27,103.52	68,733.34
177,396.00	240,371.26	....	3,784,270.21	3,787,621.56	29,836.33	26,484.98
46,158.54	291,029.60	....	1,874,919.01	1,879,467.85	5,872.23	1,323.39
....	1,750.90	....	54,105.19	62,455.62	10,642.39	2,291.96
317,661.54	2,945,855.99	....	32,373,285.62	32,639,427.41	485,303.48	219,161.69

THE HYDRO-ELECTRIC POWER COMMISSION OF ONTARIO
Fixed Assets—October 31, 1939
NIAGARA SYSTEM

	Net capital expenditures in the year	Fixed Assets				
		Under construction	In service			Total
			Water rights and intangible items	Physical property		
				Non-renewable	Renewable	
Power Plants:	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
Niagara river:						
Queenston-Chippawa...	23,287.06	16,469.40	....	47,960,952.18	28,870,840.41	76,848,261.99
Ontario Power........	*8,710.10*	6,329.16	7,281,151.42	....	14,902,844.02	22,190,324.60
Toronto Power........	1,634.52	....	3,823,511.60	....	7,693,299.43	11,516,811.03
Ottawa river:						
Chats Falls...........	6,123.04	8,852.20	....	809,544.12	6,288,986.78	7,107,383.10
Welland canal:						
DeCew Falls..........	*1,916.63*	23,314.74	8,146,525.70	165,750.13	3,354,470.00	11,690,060.57
Hamilton steam plant..	....	....	....	502,390.58	....	502,390.58
Preliminary river surveys...............	....	....	819,836.09	....	....	819,836.09
	20,417.89	54,965.50	20,071,024.81	49,438,637.01	61,110,440.64	130,675,067.96
Transformer Stations:						
Southern Ontario.......	782,676.55	461,366.32	....	326,045.38	27,300,711.53	28,088,123.23
Eastern—Chats Falls...	204,010.98	8,613.04	....	....	10,215,821.37	10,224,434.41
	986,687.53	469,979.36	....	326,045.38	37,516,532.90	38,312,557.64
Transmission Lines:						
Southern Ontario:						
Right-of-way.........	30,270.15	....	....	7,008,610.12	....	7,008,610.12
Lines...............	24,524.66	98,157.90	....	18,227.76	18,425,959.10	18,542,344.76
Eastern—Chats Falls:						
Right-of-way.........	1,119.10	....	....	1,643,446.80	....	1,643,446.80
Lines...............	*40.87*	50.15	....	....	7,501,193.23	7,501,243.38
	55,873.04	98,208.05	....	8,670,284.68	25,927,152.33	34,695,645.06
Local Systems:						
Niagara peninsula and Dundas area..........	4,656.64	....	....	....	257,997.98	257,997.98
Lincoln Electric:						
St. Catharines system...	*77.61*	....	....	187,327.61	....	187,327.61
	4,579.03	....	....	187,327.61	257,997.98	445,325.59
Sub-total...........	1,067,557.49	623,152.91	20,071,024.81	58,622,294.68	124,812,123.85	204,128,596.25
Rural Power Districts:						
H-E P.C. investment....	1,185,831.06	54,126.06	....	....	10,569,190.80	10,623,316.86
Government grants.....	1,181,236.41	54,126.05	....	....	10,474,576.52	10,528,702.57
	2,367,067.47	108,252.11	....	....	21,043,767.32	21,152,019.43
Rural Lines:						
Welland and Milton....	....	....	....	....	20,058.42	20,058.42
	3,434,624.96	731,405.02	20,071,024.81	58,622,294.68	145,875,949.59	225,300,674.10

	Cost statements	Transfers for cost purposes	Fixed assets as above
	$ c.	$ c.	$ c.
Cost of Power schedules..............	204,069,851.35	58,744.90	204,128,596.25
Rural Operating schedules..............	10,682,061.76	*58,744.90*	10,623,316.86
Rural Lines schedules..............	20,058.42	....	20,058.42

THE HYDRO-ELECTRIC POWER COMMISSION OF ONTARIO

Fixed Assets—October 31, 1939

GEORGIAN BAY SYSTEM

	Net capital expenditures in the year	Fixed Assets				
		Under construction	In service			Total
			Water rights and intangible items	Physical property		
				Non-renewable	Renewable	
Power Plants:	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
Musquash river:						
Bala No. 1 and No. 2 plants	...	...	68,658.43	1,810.00	50,610.70	121,079.13
Ragged Rapids	60,024.34	...	...	21,567.35	1,256,892.39	1,278,459.74
Lands and water rights: (Ragged Rapids, Big Eddy, Sandy Grey and Go Home developments)	*199.06*	...	30,600.78	17,224.03	...	47,824.81
Severn river:						
Wasdells	*1,143.85*	14.40	15,302.32	...	133,125.99	148,442.71
Big Chute	109.89	...	122,540.48	...	549,400.37	671,940.85
Preliminary surveys	...	...	4,107.56	...	...	4,107.56
Beaver river:						
Eugenia	18,495.33	12,824.50	6,598.51	142,381.92	1,096,677.05	1,258,481.98
Saugeen river:						
Hanover and Maple Hill	...	...	...	16,000.00	25,932.55	41,932.55
Walkerton	673.06	65.23	97,721.83	...	114,706.86	212,493.92
Southampton	*225.00*	...	69,462.43	...	68,421.32	137,883.75
Muskoka river:						
South Falls	8,906.78	...	17,365.93	...	447,507.68	464,873.61
Trethewey Falls	400.36	90.30	42,565.75	8,983.70	305,826.88	357,466.63
Hanna Chute	553.85	...	...	34,682.12	208,017.10	242,699 22
Hollow Lake dam	...	...	...	16,569.79	29,540.16	46,109.95
Preliminary surveys	...	...	14,912.93	...	...	14,912.93
Sauble river:						
Lands and rights	*16,658.09*	...	4,200.00	...	...	4,200.00
Gull river:						
Lands and rights	...	...	5,859.20	...	...	5,859.20
	70,937.61	12,994.43	499,896.15	259,218.91	4,286,659.05	5,058,768.54
Transformer Stations	105,062.92	53,081.66	...	...	1,406,115.48	1,459,197.14
Transmission Lines	1,494.19	1,718.68	...	...	2,738,693.17	2,740,411.85
Local Systems	2,777.60	737.09	...	...	95,428.69	96,165.78
Sub-total	180,272.32	68,531.86	499,896.15	259,218.91	8,526,896.39	9,354,543.31
Rural Power Districts:						
H-E.P.C. investment	445,478.59	43,704.75	...	...	2,233,038.69	2,276,743.44
Government grants	433,784.04	43,704.75	...	...	2,095,249.61	2,138,954.36
	879,262.63	87,409.50	...	...	4,328,288.30	4,415,697.80
Rural Lines:						
Brechin and Flesherton	...	...	...	...	2,837.17	2,837.17
	1,059,534.95	155,941 36	499,896.15	259,218.91	12,858,021.86	13,773,078.28

	Cost statements	Transfers for cost purposes	Fixed assets as above
	$ c.	$ c.	$ c.
Cost of power schedules	9,337,421.91	17,121.40	9,354,543.31
Rural Operating schedules	2,293,864.84	*17,121.40*	2,276,743.44
Rural Lines schedules	2,837.17	...	2,837.17

THE HYDRO-ELECTRIC POWER COMMISSION OF ONTARIO
Fixed Assets—October 31, 1939
EASTERN ONTARIO SYSTEM

	Net capital expenditures in the year	Fixed Assets				
		Under construction	In service			Total
			Water rights and intangible items	Physical property		
				Non-renewable	Renewable	
Power Plants:	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
Fenelon river:						
Fenelon Falls	78.40		60,000.00		84,400.73	144,400.73
Otonabee river:						
Auburn	968.38	34.69	31,400.00		289,507.84	320,942.53
Douro					68,478.30	68,478.30
Lakefield	643.42		15,054.96	4,565.09	217,659.86	237,279.91
Young's Point	31.48		1,978.09	752.72	7,813.69	10,544.50
Trent river:						
Heely Falls	1,854.89	36.70			1,188,495.53	1,188,532.23
Seymour	1,339.71				302,440.08	302,440.08
Ranney Falls	2,371.79				1,342,830.88	1,342,830.88
Ranney Falls No. 3	*92.51*			18,596.20	54,505.66	73,101.86
Crow river			1,000.00			1,000.00
Hagues Reach	873.29				574,325.59	574,325.59
Meyersburg	618.27				837,847.44	837,847.44
Sills Island	6,034.72	1,328.90		38,679.36	241,636.75	281,645.01
Frankford	372.89				252,772.92	252,772.92
Sydney	87.40	4.76			251,887.69	251,892.45
Deer river:						
Cordova power site			2,234.69			2,234.69
Gull river:						
Norland and Elliot Chute site			17,577.60			17,577.60
Mississippi river:						
High Falls	553.71	689.16		13,113.84	685,902.89	699,705.89
Carleton Place				9,929.06	47,847.10	57,776.16
Galetta	0.46			20,000.00	128,118.21	148,118.21
Ragged Chutes, Playfair and Appleton sites	125.60	125.60	52,272.85			52,398.45
Rosebank and Blakeney sites			23,321.18			23,321.18
Pakenham	983.75	983.75				983.75
Surveys			10,594.39			10,594.39
Madawaska river:						
Calabogie	6,879.86			80,825.74	677,806.43	758,632.17
Storage dams			2,000.00	555.00	16,075.18	18,630.18
Undeveloped sites			650,000.00			650,000.00
Preliminary river surveys			132,224.23			132,224.23
Miscellaneous equipment	943.74	943.74			46,504.47	47,448.21
Inactive plant		7.00				7.00
Intangible			2,217,761.29			2,217,761.29
	24,669.25	4,154.30	3,217,419.28	187,017.01	7,316,857.24	10,725,447.83
Transformer Stations	94,066.32	68,368.94		76,496.84	2,966,518.56	3,111,384.34
Transmission Lines	1,172.01	26,555.78		323,050.37	4,857,596.78	5,207,202.93
Local Electric Systems	*180,904.97*		703.00		26,643.24	27,346.24
Campbellford Pulp Mill				52,559.93		52,559.93
Cobourg Gas Works	*25,913.01*					
Sub-total	*86,910.40*	99,079.02	3,218,122.28	639,124.15	15,167,615.82	19,123,941.27
Rural Power Districts:						
H-E.P.C. investment	697,983.96	38,759.23			3,591,885.08	3,630,644.31
Government grants	693.968.63	38,756.35			3,543,613.86	3,582,370.21
	1,391.952.59	77,515.58			7,135,498.94	7,213,014.52
	1,305,042.19	176,594.60	3,218,122.28	639,124.15	22,303,114.76	26,336,955.79

	Cost statements	Transfers for cost purposes	Fixed assets as above
	$ c.	$ c.	$ c.
Cost of Power schedules	19,089,818.59	34,122.68	19,123,941.27
Rural Operating schedules	3,664,766.99	*34,122.68*	3,630,644.31

THE HYDRO-ELECTRIC POWER COMMISSION OF ONTARIO
Fixed Assets—October 31, 1939
THUNDER BAY SYSTEM

	Net capital expenditures in the year	Fixed Assets				
		Under construction	In service			Total
			Water rights and intangible items	Physical property		
				Non-renewable	Renewable	
Power Plants:	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
Nipigon river:						
Cameron Falls	51,756.48	766.73		245,218.71	8,951,197.70	9,197,183.14
Alexander	1,903.30	3,106.09		76,898.34	5,370,461.63	5,450,466.06
Virgin Falls dam				55,450.41	426,736.74	482,187.15
Deficit, 1921-1923			620,818.33			620,818.33
Preliminary surveys			30,242.35			30,242.35
	53,659.78	3,872.82	651,060.68	377,567.46	14,748,396.07	15,780,897.03
Transformer Stations	23,762.46	1,133.13		339,087.82	887,967.49	1,228,188.44
Transmission Lines	31,338.75	391.18		960,582.05	1,724,793.21	2,685,766.44
Local Systems	14,340.41	1,631.57		70,152.77		71,784.34
Sub-total	123,101.40	7,028.70	651,060.68	1,747,390.10	17,361,156.77	19,766,636.25
Rural Power Districts:						
H-E.P.C. investments	72,837.33	23,280.65			145,931.05	169,211.70
Government grants	72,837.33	23,280.66			145,931.04	169,211.70
	145,674.66	46,561.31			291,862.09	338,423.40
	268,776.06	53,590.01	651,060.68	1,747,390.10	17,653,018.86	20,105,059.65

	Cost statements	Fixed assets as above
	$ c.	$ c.
Cost of Power schedules	19,766,636.25	19,766,636.25
Rural Operating schedules	169,211.70	169,211.70

NON-SYSTEM PROPERTIES

	Net capital expenditures in the year	Fixed Assets				
		Under construction	In service			Total
			Water rights and intangible items	Physical property		
				Non-renewable	Renewable	
Bonnechere River Storage:	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
Round Lake dam				23,185.58		23,185.58
Deficit, 1917-1931			28,556.30			28,556.30
			28,556.30	23,185.58		51,741.88
Nipissing Rural Power District:						
H-E.P.C. investments	14,113.25	2,808.02			56,000.83	58,808.85
Government grants	14,113.24	2,808.01			55,257.09	58,065.10
	28,226.49	5,616.03			111,257.92	116,873.95
Manitoulin Rural Power District:						
H-E.P.C. investments:						
Transformer stations	37.00	37.00			5,549.10	5,586.10
Transmission lines	18,141.34	422.26			86,784.86	87,207.12
	18,178.34	459.26			92,333.96	92,793.22
Government grants	17,519.38	422.26			85,399.69	85,821.95
	35,697.72	881.52			177,733.65	178,615.17
Sudbury Rural Power District:						
H-E.P.C. investments	33,544.74				33,544.74	33,544.74
Government grants	33,544.74				33,544.74	33,544.74
	67,089.48				67,089.48	67,089.48
	131,013.69	6,497.55	28,556.30	23,185.58	356,081.05	414,320.48

THE HYDRO-ELECTRIC POWER COMMISSION OF ONTARIO

Fixed Assets—October 31, 1939

ADMINISTRATIVE AND SERVICE BUILDINGS AND EQUIPMENT

	Net capital expenditures in the year	Fixed Assets				
		Under construction	In service			Total
			Water rights and intangible items	Physical property		
				Non-renewable	Renewable	
	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
Administrative Buildings:						
Toronto:						
University Avenue	42,151.85	2,115.22	....	229,186.20	1,491,051.35	1,722,352.77
Elm and Centre Streets	....	....	....	....	160,821.95	160,821.95
	42,151.85	2,115.22	....	229,186.20	1,651,873.30	1,883,174.72
Service Buildings and Equipment:						
Toronto:						
Strachan Avenue	7,669.15	....	....	....	539,278.37	539,278.37
1379 Bloor Street West	9,425.80	....	....	....	72,563.21	72,563.21
Cobourg	....	....	....	....	22,070.08	22,070.08
Hamilton	....	....	....	750,000.00	....	750,000.00
	17,094.95	....	....	750,000.00	633,911.66	1,383,911.66
	59,246.80	2,115.22	....	979,186.20	2,285,784.96	3,267,086.38

SUMMARY

	Net capital expenditures in the year	Fixed Assets				
		Under construction	In service			Total
			Water rights and intangible items	Physical property		
				Non-renewable	Renewable	
	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
Niagara system	3,434,624.96	731,405.02	20,071,024.81	58,622,294.68	145,875,949.59	225,300,674.10
Georgian Bay system	1,059,534.95	155,941.36	499,896.15	259,218.91	12,858,021.86	13,773,078.28
Eastern Ontario system	1,305,042.19	176,594.60	3,218,122.28	639,124.15	22,303,114.76	26,336,955.79
Thunder Bay system	268,776.06	53,590.01	651,060.68	1,747,390.10	17,653,018.86	20,105,059.65
Non-system properties	131,013.69	6,497.55	28,556.30	23,185.58	356,081.05	414,320.48
Service and administrative buildings and equipment	59,246.80	2,115.22	....	979,186.20	2,285,784.96	3,267,086.38
	6,258,238.65	1,126,143.76	24,468,660.22	62,270,399.62	201,331,971.08	289,197,174.68
Less: Grants in aid of construction:						
Province of Ontario—for rural power districts	2,447,003.77	163,098.08	....	....	16,433,572.55	16,596,670.63
	3,811,234.88	963,045.68	24,468,660.22	62.270 399.62	184,898,398.53	272,600,504.05

THE HYDRO-ELECTRIC POWER COMMISSION OF ONTARIO

CAPITAL EXPENDITURES AND GRANTS—RURAL POWER DISTRICTS

Summary at October 31, 1939

Statement showing the Total Capital Expenditures to October 31, 1939, on the construction of Primary and Secondary lines in Rural Power Districts; the portion thereof in course of construction, and the investment in lines in operation; also the amounts of the Grants (fifty per cent of both Primary and Secondary lines) paid or payable to the Commission by the Province of Ontario up to October 31, 1939

System	Total capital expenditure	In course of construction	In operation	Grants (50% of Primary and Secondary lines) paid or payable by the Province as authorized by Orders-in-Council*
	$ c.	$ c.	$ c.	$ c.
Niagara system	21,152,019.43	108,252.11	21,043,767.32	10,528,702.57
Georgian Bay system	4,415,697.80	87,409.50	4,328,288.30	2,138,954.36
Eastern Ontario system	7,213,014.52	77,515.58	7,135,498.94	3,582,370.21
Thunder Bay system	338,423.40	46,561.31	291,862.09	169,211.70
Non-System properties:				
Nipissing district	116,873.95	5,616.03	111,257.92	58,065.10
Manitoulin district	173,029.07	844.52	172,184.55	85,821.95
Sudbury district	67,089.48	....	67,089.48	33,544.74
Totals	33,476,147.65	326,199.05	33,149,948.60	16,596,670.63

*Grants not made by Province in respect of a summer resort, street lighting systems in 78 districts, service buildings in 3 districts and amounts paid for business already established (hereinafter called Intangible Assets) in 11 rural distribution systems purchased from private companies.

NOTE:

The Grants payable by the Province—as above set out—in respect of rural power districts as at October 31, 1939, amount in the aggregate to	$16,596,670.63	
The cash paid over by the Province to the Commission up to October 31, 1939 on account of authorized grants to rural power districts—amount to	16,160,108.10	
Balance payable by Province		$ 436,562.53

THE HYDRO-ELECTRIC POWER

Power Accounts Receivable

System or property	Wholesale power consumers			
	Interim power bills	Accumulated amount standing as a charge or credit on October 31, 1939		Net total for wholesale consumers
		Charge	Credit	
	$ c.	$ c.	$ c.	$ c.
NIAGARA SYSTEM:				
Municipalities	1,910,835.86	124,618.89	302,855.92	1,732,598.83
Companies	641,868.87			641,868.87
Rural and local				
Lincoln Electric				
	2,552,704.73	124,618.89	302,855.92	2,374,467.70
GEORGIAN BAY SYSTEM:				
Municipalities	122,818.57	11,373.14	27,103.52	107,088.19
Companies	5,237.46			5,237.46
Rural and local				
	128,056.03	11,373.14	27,103.52	112,325.65
EASTERN ONTARIO SYSTEM:				
Municipalities	301,379.83	19,819.67	29,836.33	291,363.17
Companies	53,239.75			53,239.75
Rural				
Local				
	354,619.58	19,819.67	29,836.33	344,602.92
THUNDER BAY SYSTEM:				
Municipalities	166,914.42	206.99	5,872.23	161,249.18
Companies	152,552.94			152,552.94
Rural and local				
	319,467.36	206.99	5,872.23	313,802.12
NON-SYSTEM PROPERTIES:				
Manitoulin rural				
Nipissing rural				
Sudbury rural				
Grand totals	3,354,847.70	156,018.69	365,668.00	3,145,198.39

COMMISSION OF ONTARIO

—October 31, 1939

Retail power consumers—local and rural districts	Net total of power accounts receivable	Balance sheet figures		Debit balances three months or more overdue
		Debit balances	Credit balances	
$ c.	$ c.	$ c.	$ c.	$ c.
....	1,732,598.83	1,755,493.24	22,894.41	611.76
....	641,868.87	641,868.87	....	....
618,931.86	618,931.86	618,931.86	....	24,981.26
4,808.95	4,808.95	4,808.95	....	108.77
623,740.81	2,998,208.51	3,021,102.92	22,894.41	25,701.79
....	107,088.19	107,748.51	660.32	....
....	5,237.46	5,237.46	....	....
144,032.62	144,032.62	144,032.62	....	6,261.18
144,032.62	256,358.27	257,018.59	660.32	6,261.18
....	291,363.17	291,959.39	596.22	....
....	53,239.75	53,239.75	....	....
189,771.28	189,771.28	189,771.28	....	10,721.44
2,431.03	2,431.03	2,431.03	....	44.21
192,202.31	536,805.23	537,401.45	596.22	10,765.65
....	161,249.18	161,249.18	....	....
....	152,552.94	152,552.94	....	69,868.37
9,509.99	9,509.99	9,509.99	....	1,248.75
9,509.99	323,312.11	323,312.11	....	71,117.12
6,482.74	6,482.74	6,482.74	....	27.93
3,910.94	3,910.94	3,910.94	....	116.41
5,943.98	5,943.98	5,943.98	....	97.80
16,337.66	16,337.66	16,337.66	....	242.14
985,823.39	4,131,021.78	4,155,172.73	24,150.95	114,087.88

THE HYDRO-ELECTRIC POWER

Funded Debt Issued or

Description	Application of proceeds
2¼%-2⅜% Serial debentures	Repayment of Province of Ont. advances
5% H-E.P.C. debentures	Refunding Toronto Power Co.
6% “ “	Toronto Power Co.
6% “ “	T. & Y. R.R. equipment
2½% “ “	Refunding Prov. of Ont. advances, etc.
6% “ “	Refunding Ontario Power Co.
3½% “ “	Refunding D.P. & T. and E. D. Co's.
5% Ontario Power Co. bonds	Ontario Power Co.
2½% H-E.P.C. debentures	Refunding Prov. of Ont. advances, etc.
5% Ontario Transmission Co. bonds	Ontario Transmission Co.
3% H-E.P.C. debentures	Financing Plant Extensions
3¼% “ “	Refunding Toronto Power Co.
4% “ “	Ontario Power Co.
4% “ “	Essex system
4% “ “	Thorold system
4¾% “ “	Dominion Power & Transmission Co.
Municipal debentures assumed	
RADIAL RAILWAYS:	
6% Hydro-Electric Railway bonds	Toronto & York Radial
Funded debt as shown on the Balance Sheet of the Hydro-Electric Power Commission of Ontario	
NORTHERN ONTARIO PROPERTIES:	
2½% H-E.P.C. debentures	Abitibi & St. Joseph districts
2½% “ “	Refunding Ontario Power Service Corp'n
3½% “ “	and for financing plant extensions
3% “ “	Financing Plant Extensions
Funded Debt relating to all properties vested in, or operated by, the Commission	
Hydro-Electric Radial Railway bonds pledged with the Bank of Montreal as security for loan of $500,000.00:	
5% Hydro-Electric Railway bonds	Port Credit & St. Catharines Radial

COMMISSION OF ONTARIO

Assumed—October 31, 1939

Date of issue	Date of maturity	Principal outstanding October 31, 1939	Interest for the year 1938-1939	Interest accrued October 31, 1939
		$ c.	$ c.	$ c.
March 15, 1937	September 15, 1937/39	4,000,000.00	58,437.50	....
June 16, 1924	June 15, 1939	4,000,000.00	125,000.00	....
December 1, 1920	December 1, 1940	413,200.00	24,792.00	10,330.00
December 1, 1920	December 1, 1940	205,800.00	12,348.00	5,145.00
March 1, 1936	March 1, 1941	10,000,000.00	250,000.00	41,666.67
June 24, 1921	June 24, 1941	3,200,000.00	192,000.00	67,857.53
January 1, 1935	January 1, 1943	10,000,000.00	350,000.00	116,666.66
February 1, 1903	February 1, 1943	7,454,000.00	372,475.00	93,175.00
June 15, 1936	June 15, 1944	10,000,000.00	250,000.00	93,750.00
May 1, 1905	May 1, 1945	1,174,000.00	59,375.00	....
August 1, 1938	August 1, 1948	7,000,000.00	210,000.00	52,500.00
February 1, 1938	February 1, 1953	9,000,000.00	292,500.00	73,125.00
August 1, 1917	August 1, 1957	8,000,000.00	320,000.00	80,000.00
June 1, 1918	June 1, 1958	200,000.00	8,000.00	3,333.34
December 1, 1918	December 1, 1958	100,000.00	4,000.00	1,666.67
January 1, 1930	January 1, 1970	13,000,000.00	617,500.02	205,833.33
		79,747,000.00	3,146,427.52	845,049.20
July 1, 1913	July 1, 1943	2,036.33	671.96	146.67
		79,749,036.33	3,147,099.48	845,195.87
December 1, 1920	December 1, 1940	2,375,000.00	142,500.00	59,375.00
....	....	82,124,036.33	3,289,599.48	904,570.87
March 1, 1936	March 1, 1941	5,000,000.00	125,000.00	20,833.33
April 1, 1937	April 1, 1942	11,000,000.00	275,000.00	22,916.66
April 1, 1937	April 1, 1947	8,000,000.00	280,000.00	23,333.33
August 1, 1938	August 1, 1948	5,500,000.00	165,000.00	41,250.00
		29,500,000.00	845,000.00	108,333.32
....	....	111,624,036.33	4,134,599.48	1,012,904.19
November 1, 1919	November 1, 1969	1,200,000.00	....	....

THE HYDRO-ELECTRIC POWER

Renewals Reserves

	Niagara system	Georgian Bay system
	$ c.	$ c.
Balances at November 1, 1938	29,953,780.97	2,294,726.75
Transferred during the year	....	....
Provisions in the year—direct	1,615,797.66	154,626.12
indirect	....	....
Interest at 4% on reserves' balances	1,198,151.24	91,789.06
Adjustments re transfer of equipment	(41,765.42)	(1,607.35)
Sub-total	32,725,964.45	2,539,534.58
Expenditures for the year	269,750.98	73,175.37
Balances at October 31, 1939	32,456,213.47	2,466,359.21
Account balances:		
Power plants, transmission lines and transformer stations	28,901,071.52	2,105,104.37
Rural power districts	3,547,568.71	360,225.91
Rural lines	7,573.24	1,028.93
Manitoulin rural power district	....	....
Nipissing rural power district	....	....
Sudbury rural power district	....	....
Administrative office building	....	....
Service buildings and equipment	....	....
	32,456,213.47	2,466,359.21

THE HYDRO-ELECTRIC POWER

Contingencies and Obsolescence

	Niagara system	Georgian Bay system
	$ c.	$ c.
Balances at November 1, 1938	5,196,169,77	579,471.43
Transferred during the year	....	....
Provision in the year as per cost statement	200.59	35,903.73
Interest at 4% on reserves' balances	207,846.79	23,178.85
Profits from sale of securities	1,727.29	141.24
Adjustments re transfer of equipment	53,535.34	1,841.61
Sub-total	5,459,479.78	640,536.86
Contingencies met with during year	407,028.67	65,197.76
Terminal Building—Hamilton	26,983.06	....
Balances at October 31, 1939	5,025,468.05	575,339.10
Account balances:		
Power plants, transmission lines, transformer stations and rural power districts	5,021,824.27	574,884.01
Rural lines	3,643.78	455.09
Manitoulin rural power district	....	....
Nipissing rural power district	....	....
Sudbury rural power district	....	....
	5,025,468.05	575,339.10

COMMISSION OF ONTARIO

—October 31, 1939

Eastern Ontario system	Thunder Bay system	Non-System properties	Service and administrative buildings and equipment	Totals for power undertakings operated on a "cost basis"
$ c.	$ c.	$ c.	$ c.	$ c.
4,907,418.65	2,473,966.44	15,943.67	546,035.88	40,191,872.36
....	....	509.58	....	509.58
271,339.98	161,597.19	3,250.87	....	2,206,611.82
....	....	....	12,686.37	12,686.37
196,296.75	98,958.65	658.12	18,688.81	1,604,542.63
(13,350.13)	....	....	....	(56,722.90)
5,361,705.25	2,734,522.28	20,362.24	577,411.06	43,959,499.86
110,126.74	921.80	....	3,817.86	457,792.75
5,251,578.51	2,733,600.48	20,362.24	573,593.20	43,501,707.11
4,517,491.08	2,714,612.43	....	....	38,238,279.40
734,087.43	18,988.05	....	....	4,660,870.10
....	....	....	....	8,602.17
....	....	8,744.41	....	8,744.41
....	....	10,498.63	....	10,498.63
....	....	1,119.20	....	1,119.20
....	....	....	187,418.73	187,418.73
....	....	....	386,174.47	386,174.47
5,251,578.51	2,733,600.48	20,362.24	573,593.20	43,501,707.11

COMMISSION OF ONTARIO

Reserves—October 31, 1939

Eastern Ontario system	Thunder Bay system	Non-System properties	Total for power undertakings operated on a "cost basis"
$ c.	$ c.	$ c.	$ c.
1,566,841.22	1,114,139.88	3,997.24	8,460,619.54
....	....	254.79	254.79
67,268.15	86,513.17	....	189,885.64
62,673.65	44,565.60	170.08	338,434.97
318.15	176.32	....	2,363.00
....	....	....	55,376.95
1,697,101.17	1,245,394.97	4,422.11	9,046,934.89
38,459.90	9,463.86	84.39	520,234.58
....	....	....	26,983.06
1,658,641.27	1,235,931.11	4,337.72	8,499.717.25
1,658,641.27	1,235,931.11	....	8,491,280.66
....	....	....	4,098.87
....	....	1,881.95	1,881.95
....	....	2,190.79	2,190.79
....	....	264.98	264.98
1,658,641.27	1,235,931.11	4,337.72	8,499,717.25

THE HYDRO-ELECTRIC POWER

Stabilization of Rates Reserves

	Niagara system
	$ c.
Balance at November 1, 1938	4,554,725.33
Appropriations in the year as per cost statement	....
Interest at 4% on stabilization balances	182,189.01
Balance at October 31, 1939	4,736,914.34
Account balances:	
Systems	4,736,914.34

THE HYDRO-ELECTRIC POWER

Sinking Fund Reserves

	Niagara system	Georgian Bay system
	$ c.	$ c.
Balances at November 1, 1938	41,134,686.00	1,632,255.57
Transferred during the year	....	....
Provision in the year—direct	2,294,568.45	118,135.78
indirect	....	....
Interest at 4% on reserves' balances	1,646,390.77	65,290.21
Balances at October 31, 1939	45,075,645.22	1,815,681.56
Account balances:		
Systems	43,984,449.67	1,686,551.71
Rural power districts	1,075,093.57	127,721.74
Rural lines	16,101.98	1,408.11
Bonnechere River storage	....	....
Manitoulin rural power district	....	....
Nipissing rural power district	....	....
Sudbury rural power district	....	....
Administrative office buildings	....	....
Service buildings and equipment	....	....
	45,075,645.22	1,815,681.56

COMMISSION OF ONTARIO

—October 31, 1939

Georgian Bay system	Eastern Ontario system	Thunder Bay system	Total for power undertakings operated on a "cost basis"
$ c.	$ c.	$ c.	$ c.
169,378.64	331,613.56	128,359.92	5,184,077.45
94,107.00	177,396.00	46,158.54	317,661.54
6,775.15	13,264.54	5,134.40	207,363.10
270,260.79	522,274.10	179,652.86	5,709,102.09
270,260.79	522,274.10	179,652.86	5,709,102.09

COMMISSION OF ONTARIO

—October 31, 1939

Eastern Ontario system	Thunder Bay system	Non-System properties	Service and administrative buildings and equipment	Totals for power undertakings operated on a "cost basis"
$ c.	$ c.	$ c.	$ c.	$ c.
2,338,308.40	2,339,888.69	18,600.40	448,108.41	47,911,847.47
....	....	454.30	....	454.30
240,371.26	291,029.60	1,750.90	....	2,945,855.99
....	....	1,737.60	25,826.20	27,563.80
93,532.34	93,595.56	762.18	17,924.34	1,917,495.40
2,672,212.00	2,724,513.85	23,305.38	491,858.95	52,803,216.96
2,434,728.42	2,718,823.42	....	....	50,824,553.22
237,483.58	5,690.43	....	....	1,445,989.32
....	....	....	....	17,510.09
....	....	16,004.05	....	16,004.05
....	....	3,447.23	....	3,447.23
....	....	3,071.40	....	3,071.40
....	....	782.70	....	782.70
....	....	....	301,027.21	301,027.21
....	....	....	190,831.74	190,831.74
2,672,212.00	2,724,513.85	23,305.38	491,858.95	52,803,216.96

THE HYDRO-ELECTRIC POWER COMMISSION OF ONTARIO

Account with

The Provincial Treasurer of the Province of Ontario

As at October 31, 1939

ADVANCES FROM THE PROVINCE OF ONTARIO

	Total	Northern Ontario Properties operated for the Province of Ontario	Niagara and other systems operated on a "cost basis"
	$ c.	$ c.	$ c.
ADVANCES FOR CAPITAL EXPENDITURES:			
Cash advances made by the Province to the Commission for capital expenditures purposes during the years 1909 to 1934, inclusive	207,250,258.34	8,272,889.39	198,977,368.95
Cash returned by the Commission to the Province on April 30, 1935, to cover the difference between advances made by the Province to the Commission during the year ended October 31, 1934, and the capital expenditures made out of such advances by the Commission in that year	247,507.98	74,001.99	173,505.99
Total advances for capital expenditures	207,002,750.36	8,198,887.40	198,803,862.96
REPAYMENTS OF ADVANCES—1926-33:			
Cash repayments made by the Commission to the Province during the years 1926 to 1933 inclusive, which have been applied in each subsequent year to reduce the Commission's share in maturing Provincial obligations	17,008,616.73	....	17,008,616.73
Commission's share in Provincial bonds at October 31, 1934	189,994,133.63	8,198,887.40	181,795,246.23
REPAYMENTS OF ADVANCES:			
Retirements of Commission's share of Provincial bonds matured in the period November 1, 1934, to October 31, 1939—			
In year ended Oct. 31, 1935... $ 3,946,628.69			
" " " " 1936... 21,998,092.45			
" " " " 1937... 13,557,615.63			
" " " " 1938... 1,777,019.93			
" " " " 1939... 2,151,516.02	43,430,872.72	1,975,602.58	41,455,270.14
Commission's share in Provincial bonds at October 31, 1939	146,563,260.91	6,223,284.82	140,339,976.09

THE HYDRO-ELECTRIC POWER COMMISSION OF ONTARIO

STATEMENTS FOR MUNICIPALITIES

RECEIVING POWER UNDER COST CONTRACTS

For the Year ended October 31, 1939

STATEMENTS FOR EACH SYSTEM

Cost of Power	Credit or Charge
Sinking Fund	Rural Operating

NIAGARA

Statement showing the amount chargeable (upon annual adjustment) to each it by the Commission; the amount received by the Commission or charged to each Municipality in respect of power

Municipality	Interim rates per horsepower collected by Commission during year		Share of capital cost of system	Average horsepower supplied in year after correction for power factor	Share of operating	
	To Dec. 31, 1938	From Jan. 1, 1939			Cost of power purchased	Operating, maintenance and administrative expenses
	$ c.	$ c.	$ c.		$ c.	$ c.
Acton	27.50	28.50	241,565.86	954.6	6,459.36	5,074.53
Agincourt	35.50	35.50	52,122.21	186.8	1,263.99	1,248.68
Ailsa Craig	46.50	44.00	36,930.40	109.6	741.62	1,206.45
Alvinston	70.50	68.00	39,482.04	89.3	604.25	1,360.02
Amherstburg	33.50	33.50	236,396.47	842.1	5,698.12	6,025.52
Ancaster twp	27.50	27.50	80,125.10	351.0	2,375.06	1,796.01
Arkona	67.50	65.00	26,494.11	53.5	362.01	1,055.87
Aylmer	30.50	30.50	153,582.81	611.5	4,137.75	3,670.75
Ayr	29.50	29.50	49,254.84	196.2	1,327.60	1,212.00
Baden	28.50	28.50	79,018.68	325.5	2,202.52	1,897.35
Beachville	28.50	28.50	111,615.18	455.9	3,084.88	2,735.56
Beamsville	26.00	26.00	85,739.32	408.2	2,762.11	1,785.88
Belle River	35.50	34.50	43,929.72	160.2	1,084.00	1,326.72
Blenheim	34.50	34.50	128,712.41	497.7	3,367.72	3,692.17
Blyth	49.50	47.00	39,691.03	111.7	755.82	1,385.04
Bolton	38.50	38.50	44,481.78	153.8	1,040.70	1,005.80
Bothwell	42.50	42.50	35,768.79	124.5	842.44	1,505.21
Brampton	27.00	27.00	577,358.79	2,720.2	18,406.40	15,362.58
Brantford	22.50	23.50	3,175,944.86	15,216.9	102,966.09	60,664.52
Brantford twp	27.50	27.50	160,975.14	756.1	5,116.20	5,626.09
Bridgeport	31.50	31.50	34,348.04	128.4	868.83	717.55
Brigden	60.50	55.00	31,080.64	79.5	537.94	1,145.88
Brussels	45.50	44.00	45,643.74	133.4	902.66	1,551.30
Burford	30.50	30.50	43,012.98	174.2	1,178.73	1,105.60
Burgessville	50.50	50.50	16,565.67	47.8	323.44	742.78
Caledonia	27.50	27.50	81,569.25	351.9	2,381.15	2,143.17
Campbellville	55.50	55.50	13,718.53	34.2	231.42	456.58
Cayuga	43.50	42.00	42,574.64	130.2	881.01	1,266.30
Chatham	26.50	26.50	1,328,843.48	5,856.1	39,625.66	28,858.74
Chippawa	21.50	21.50	48,032.89	297.0	2,009.67	1,029.42
Clifford	51.50	50.00	34,034.12	86.6	585.98	921.12
Clinton	33.50	33.50	147,759.10	546.4	3,697.25	3,796.41
Comber	41.50	41.50	44,007.85	131.1	887.10	1,683.94
Cottam	40.50	40.50	24,391.25	77.2	522.38	825.16
Courtright	65.50	64.00	20,482.83	43.1	291.64	641.02
Dashwood	45.50	42.00	26,274.73	81.4	550.80	611.92
Delaware	36.50	34.00	15,755.29	64.0	433.06	473.48
Delhi	36.00	36.00	126,987.31	473.5	3,203.97	2,902.05
Dorchester	37.50	36.00	29,978.37	107.9	730.11	804.81
Drayton	51.50	50.00	47,313.52	117.4	794.39	1,424.66

SYSTEM *N—COST OF POWER*

Municipality as the Cost—under Power Commission Act—of Power supplied to from each Municipality, and the amount remaining to be credited supplied to it in the year ended October 31, 1939

costs and fixed charges			Revenue received in excess of cost of power sold to private com-panies	Amount charged to each municipality in respect of power supplied to it in the year	Amount received from (or billed against) each municipality by the Commission	Amounts remaining to be credited or charged to each municipality	
Interest	Provision for renewals	Provision for sinking fund	Credit			Credited	Charged
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
10,913.56	2,092.46	2,542.31	471.56	26,610.66	27,043.90	433.24	....
2,344.74	466.27	548.46	92.28	5,779.86	6,629.91	850.05	....
1,641.56	372.32	385.35	54.14	4,293.16	4,873.07	579.91	....
1,784.50	448.14	418.35	44.11	4,571.15	6,110.35	1,539.20	....
10,535.53	2,100.10	2,466.67	415.99	26,409.95	28,210.90	1,800.95	....
3,608.33	641.35	841.66	173.39	9,089.02	9,652.93	563.91	....
1,185.56	307.75	278.19	26.43	3,162.95	3,503.30	340.35	....
6,881.87	1,311.53	1,612.44	302.07	17,312.27	18,652.25	1,339.98	....
2,218.08	423.56	518.27	96.92	5,602.59	5,787.89	185.30	....
3,560.43	660.90	831.55	160.79	8,991.96	9,277.28	285.32	....
5,046.22	946.64	1,179.10	225.21	12,767.19	12,994.23	227.04	....
3,855.33	675.84	902.34	201.65	9,779.85	10,614.26	834.41	....
1,970.27	389.49	462.21	79.14	5,153.55	5,554.83	401.28	....
5,806.95	1,114.20	1,357.10	245.86	15,092.28	17,170.65	2,078.37	....
1,776.93	413.05	417.46	55.18	4,693.12	5,295.13	602.01	....
1,995.14	422.86	468.09	75.98	4,856.61	5,922.58	1,065.97	....
1,608.91	332.21	377.03	61.50	4,604.30	5,289.10	684.80	....
25,978.49	4,338.51	6,074.26	1,343.74	68,816.50	73,444.22	4,627.72	....
146,486.67	24,841.63	33,900.04	5,982.17	362,876.78	359,010.28	....	3,866.50
7,258.75	1,202.01	1,695.25	373.45	20,524.85	20,793.65	268.80	....
1,548.64	308.36	361.48	63.43	3,741.43	4,044.98	303.55	....
1,392.73	335.28	327.73	39.27	3.700.29	4,449.45	749.16	....
2,049.69	467.46	480.41	65.90	5,385.62	5,904.74	519.12	....
1,932.04	365.28	452.59	86.05	4,948.19	5,312.20	364.01	....
734.01	167.70	171.68	23 61	2,116.00	2,413.46	297.46	....
3,652.21	657.12	853.73	173.83	9,513.55	9,676.33	162.78	....
578.99	139.31	135.87	16.89	1,525.28	1,898.56	373.28	....
1,932.70	438.90	453.31	64.32	4,907.90	5,504.18	596.28	....
59,843.08	10,278.10	13,980.06	2,892.83	149,692.81	155,187.46	5,494.65	....
2,114.44	259.76	493.68	146.71	5,760.26	6,386.21	625.95	....
1,530.75	369.59	358.29	42.78	3,722.95	4,350.09	627.14	....
6,674.37	1,326.74	1,555.03	269.91	16,779.89	17,771.45	991.56	....
1,972.47	441.21	461.17	64.76	5,381.13	5,439.93	58.80	....
1,027.51	212.97	240.48	38.14	2,790.36	3,126.60	336.24	....
919.58	235.75	215.56	21.29	2,282.26	2,769.62	487.36	....
1,172.45	261.68	275.78	40.21	2,832.42	3,463.99	631.57	....
702.58	132.22	165.21	31.62	1,874.93	2,201.72	326.79	....
5,728.30	1,144.17	1,336.41	233.90	14,081.00	17,047.20	2,966.20	....
1,341.93	274.56	314.79	53.30	3,412.90	3,914.45	501.55	....
2,123.93	517.96	497.60	57.99	5,300.55	5,898.25	597.70	....

NIAGARA

Statement showing the amount chargeable (upon annual adjustment) to each it by the Commission; the amount received by the Commission or charged to each Municipality in respect of power

Municipality	Interim rates per horsepower collected by Commission during year		Share of capital cost of system	Average horsepower supplied in year after correction for power factor	Share of operating	
	To Dec. 31, 1938	From Jan. 1, 1939			Cost of power purchased	Operating, maintenance and administrative expenses
	$ c.	$ c.	$ c.		$ c.	$ c.
Dresden	39.50	38.00	108,544.90	377.0	2,550.99	4,030.11
Drumbo	36.50	35.00	24,280.62	91.9	621.85	792.89
Dublin	55.00	50.00	15,445.71	44.8	303.14	609.29
Dundas	22.50	22.50	369,251.71	1,797.4	12,162.22	6,475.45
Dunville	27.50	27.50	209,983.13	1,068.9	7,232.78	4,327.19
Dutton	33.50	33.50	61,228.16	236.3	1,598.94	2,034.86
Elmira	31.50	30.00	182,930.99	707.4	4,786.67	3,387.94
Elora	31.50	31.50	93,059.64	350.3	2,370.33	2,517.64
Embro	42.50	40.00	30,078.43	103.4	699.66	949.32
Erieau	49.50	48.00	30,352.44	88.0	595.46	878.33
Erie Beach	60.50	55.00	8,446.32	22.5	152.25	418.83
Essex	31.50	31.50	120,482.12	451.7	3,056.46	2,798.82
Etobicoke twp.	23.50	23.50	1,202,202.16	5,732.1	38,786.61	22,853.99
Exeter	34.50	34.50	140,337.13	510.9	3,457.04	3,362.41
Fergus	31.50	31.50	287,812.90	1,105.2	7,478.40	6,742.01
Fonthill	29.50	29.50	29,285.38	130.2	881.01	684.88
Forest	41.50	40.00	142,747.53	453.0	3,065.25	4,145.13
Forest Hill Village	26.34	26.34	1,339,552.80	6,492.5	43,931.90	31,931.46
Galt	22.50	24.00	1,624,950.04	7,584.2	51,318.95	32,707.32
Georgetown	31.50	31.50	381,310.76	1,413.5	9,564.53	8,062.24
Glencoe	51.50	50.00	74,165.08	199.0	1,346.55	2,786.94
Goderich	38.50	37.50	377,812.80	1,249.2	8,452.79	8,692.29
Granton	48.50	45.00	21,115.82	63.6	430.35	642.48
Guelph	23.50	23.50	2,049,891.73	9,698.6	65,626.17	42,964.14
Hagersville	28.50	28.50	173,525.71	658.5	4,455.78	3,472.14
Hamilton	20.00	21.25	20,301,171.66	103,230.9	698,518.21	337,905.07
Harriston	38.50	37.50	110,345.99	372.6	2,521.22	2,868.12
Harrow	34.50	34.50	121,623.76	420.0	2,841.96	2,560.07
Hensall	45.50	45.50	62,618.93	175.1	1,184.82	1,371.48
Hespeler	24.50	24.50	456,612.41	2,143.9	14,506.83	9,394.68
Highgate	42.50	42.50	23,686.67	75.2	508.85	766.72
Humberstone	24.50	24.50	86,437.25	436.7	2,954.96	1,823.14
Ingersoll	24.50	25.50	530,452.18	2,374.7	16,068.56	11,711.12
Jarvis	35.50	35.50	57,812.32	170.0	1,150.32	1,250.30
Kingsville	34.50	33.50	162,454.19	584.3	3,953.70	3,530.63

SYSTEM *N—COST OF POWER*

Municipality as the Cost—under Power Commission Act—of Power supplied to from each Municipality, and the amount remaining to be credited supplied to it in the year ended October 31, 1939

costs and fixed charges			Revenue received in excess of cost of power sold to private companies	Amount charged to each municipality in respect of power supplied to it in the year	Amount received from (or billed against) each municipality by the Commission	Amounts remaining to be credited or charged to each municipality	
Interest	Provision for renewals	Provision for sinking fund	Credit			Credited	Charged
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c
4,863.38	1,007.27	1,142.60	186.23	13,408.12	14,422.22	1,014.10	....
1,089.42	216.62	255.55	45.40	2,930.93	3,239.88	308.95	....
689.50	158.68	162.53	22.13	1,901.01	2,275.82	374.81	....
16,611.35	2,668.41	3,877.69	887.89	40,907.23	40,440.95	....	466.28
9,432.68	1,547.72	2,210.78	528.02	24,223.13	29,394.26	5,171.13	....
2,670.47	510.36	625.58	116.73	7,323.48	7,916.74	593.26	....
8,205.89	1,604.48	1.925.26	349.45	19,560.79	21,396.22	1,835.43	....
4,171.96	827.37	974.71	173.04	10,688.97	11,034.43	345.46	....
1,348.79	287.14	318.27	51.08	3,552.10	4,177.82	625.72	....
1,363.26	310.91	319.92	43.47	3,424.41	4,240.04	815.63	....
376.51	89.79	89.02	11.11	1,115.29	1,245.75	130.46	....
5,416.97	1,047.64	1,267.76	223.13	13,364.52	14,227.46	862.94	....
54,229.96	8,923.08	12,646.05	2,831.58	134,608.11	134,704.13	96.02	....
6,305,66	1,278.25	1,475.27	252.38	15,626.25	17,626.05	1,999.80	....
12,831.62	2,513.94	3,007.53	545.95	32,027.55	34,814.05	2,786.50	....
1,185.88	198.70	276.79	64.31	3,162.95	3,841.37	678.42	....
6,381.85	1,382.03	1,496.47	223.78	16,246.95	18,233.55	1,986.60	....
60,313.68	9,125.57	14,091.94	3,207.21	156,187.34	171,011.53	14,824.19	....
73,527.96	12,201.28	17,111.76	3,746.49	183,120.78	180,108.55	....	3,012.23
17,194.58	3,453.86	4,014.03	698.25	41,590.99	44,524.46	2,933.47	....
3,334.53	785.91	781.58	98.30	8,937.21	9,997.45	1,060.24	....
17,014.33	3,633.25	3,976.36	617.09	41,151.93	45,687.89	4,535.96	....
939.09	213.15	221.57	31.42	2,415.22	2,896.45	481.23	....
92,474.83	15,188.12	21,567.73	4,790.97	233,030.02	227,917.46	....	5,112.56
7,779.79	1,539.29	1,814.94	325.29	18,736.65	18,767.94	31.29	....
916,237.28	139,899.96	213,285.15	50,994.64	2,254,851.03	2,172,057.73	....	82,793.30
4,955.48	1,048.83	1,161.56	184.06	12,371.15	14,032.67	1,661.52	....
5,457.59	1,115.43	1,277.99	207.47	13,045.57	14,490.27	1,444.70	....
2,810.39	655.91	658.52	86.50	6,594.62	7,965.16	1,370.54	....
20,601.57	3,408.10	4,808.40	1,059.06	51,660.52	52,524.90	864.38	....
1,066.32	231.52	249.40	37.15	2,785.66	3,194.93	409.27	....
3,900.19	632.30	909.74	215.72	10,004.61	10,698.79	694.18	....
24,048.78	4,165.61	5,604.49	1,173.07	60,425.49	60,147.59	....	277.90
2,554.39	579.20	596.18	83.98	6,046.41	6,033.50	....	12.91
7,288.52	1,451.69	1,707.67	288.64	17,643.57	19,681.44	2,037.87	....

NIAGARA

Statement showing the amount chargeable (upon annual adjustment) to each it by the Commission; the amount received by the Commission or charged to each Municipality in respect of power

Municipality	Interim rates per horsepower collected by Commission during year		Share of capital cost of system	Average horsepower supplied in year after correction for power factor	Share of operating	
	To Dec. 31, 1938	From Jan. 1, 1939			Cost of power purchased	Operating, maintenance and administrative expenses
	$ c.	$ c.	$ c.		$ c.	$ c.
Kitchener	22.50	23.50	4,387,059.57	20,814.7	140,843.94	82,057.18
Lambeth	37.50	37.50	33,317.71	117.4	794.39	967.31
LaSalle	32.50	32.50	60,273.02	221.4	1,498.12	1,616.98
Leamington	33.50	32.50	455,702.72	1,627.6	11,013.26	9,861.23
Listowel	32.50	31.50	277,267.90	1,089.7	7,373.52	6,967.32
London	22.50	23.00	7,434,322.19	35,213.8	238,276.33	130,349.43
London twp.	29.50	29.50	118,510.92	488.7	3,306.82	2,531.62
Long Branch	25.50	25.50	211,853.23	934.3	6,322.00	4,226.29
Lucan	33.50	33.50	45,467.69	179.9	1,217.30	1,335.33
Lynden	33.50	33.50	22,919.71	89.5	605.61	726.97
Markham	32.50	32.50	84,567.86	337.2	2,281.68	2,436.80
Merlin	41.50	41.50	24,040.79	78.3	529.82	845.50
Merritton	19.50	20.00	977,953.69	5,681.2	38,442.19	17,841.61
Milton	30.50	30.50	230,841.96	977.8	6,616.34	6,505.91
Milverton	31.50	31.50	82,058.86	315.8	2,136.88	1,887.36
Mimico	21.50	22.50	471,973.43	2,349.4	15,897.36	9,327.94
Mitchell	29.50	29.50	132,103.29	543.7	3,678.98	3,851.87
Moorefield	60.50	58.00	15,416.60	33.5	226.68	501.80
Mount Brydges	37.50	37.50	27,327.18	101.4	686.13	885.86
Newbury	49.50	49.50	12,508.45	35.7	241.57	500.89
New Hamburg	30.50	30.50	132,010.59	521.3	3,527.41	2,787.43
New Toronto	25.50	25.50	1,543,629.54	6,899.8	46,687.92	30,797.61
Niagara Falls	17.00	17.00	1,268,075.00	9,219.7	62,385.66	23,621.04
Niagara-on-the-Lake	22.50	22.50	90,633.10	564.7	3,821.08	2,376.81
Norwich	30.50	30.50	102,654.36	409.0	2,767.52	2,769.20
Oil Springs	39.50	38.50	61,902.88	207.0	1,400.68	1,932.62
Otterville	40.50	40.50	34,661.16	115.2	779.51	984.83
Palmerston	35.50	34.00	135,748.61	499.6	3,380.57	3,685.42
Paris	23.50	24.50	288,065.32	1,352.0	9,148.39	5,949.97
Parkhill	55.50	55.50	69,036.00	160.7	1,087.39	1,635.34
Petrolia	35.50	35.50	289,926.82	1,033.0	6,989.86	8,019.49
Plattsville	45.50	44.00	32,242.23	88.0	595.46	940.18
Point Edward	33.50	33.50	288,998.55	1,163.9	7,875.60	10,870.58
Port Colborne	24.50	24.50	358,852.15	1,813.0	12,267.78	7,159.88
Port Credit	29.50	29.50	174,654.03	732.7	4,957.86	4,732.49

SYSTEM *N—COST OF POWER*

Municipality as the Cost—under Power Commission Act—of Power supplied to from each Municipality, and the amount remaining to be credited supplied to it in the year ended October 31, 1939

costs and fixed charges			Revenue received in excess of cost of power sold to private com-panies	Amount charged to each municipality in respect of power supplied to it in the year	Amount received from (or billed against) each municipality by the Commission	Amounts remaining to be credited or charged to each municipality	
Interest	Provision for renewals	Provision for sinking fund	Credit			Credited	Charged
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
198,174.54	32,273.05	46,163.05	10,282.17	489,229.59	485,679.14	....	3,550.45
1,491.83	308.94	349.68	57.99	3,854.16	4,401 87	547.71	....
2,710.59	530.43	633.28	109.37	6,880.03	7,194.40	314.37	....
20,407.41	4,083.06	4,784.38	804.01	49,345.33	53,162.06	3,816.73	....
12,459.47	2,385.67	2,918.50	538.30	31,566.18	34,499.24	2,933.06	....
334,542.46	54,339.81	77,981.12	17,395.13	818,094.02	806,781.40	....	11,312.62
5,314.19	984.43	1,243.90	241.41	13,139.55	14,415.15	1,275.60	....
9,288.07	1,606.35	2,167.90	461.53	23,149.08	23,823.80	674.72	....
2,034.17	389.00	476.58	88.87	5,363.51	6,027.19	663.68	....
1,026.52	200.86	240.82	44.21	2,756.57	2,997.47	240.90	....
3,805.81	698.52	889.54	166.57	9,945.78	10,958.18	1,012.40	....
1,081.66	231.74	253.13	38.68	2,903.17	3,248.96	345.79	....
44,083.94	5,986.15	10,259.07	2,806.43	113,806.53	113,139.29	....	667.24
10,316.66	1,884.37	2,411.50	483.02	27,251.76	29,823.89	2,572.13	....
3,694.56	716.96	863.76	156.00	9,143.52	9,947.30	803.78	....
21,340.26	3,346.75	4,965.21	1,160.57	53,716.95	52,394.80	....	1,322.15
5,945.07	1,094.44	1,388.86	268.58	15,690.64	16,040.22	349.58	....
690.47	176.54	162.16	16.55	1,741.10	1,959.46	218.36	....
1,224.05	244.96	286.66	50.09	3,277.57	3,801.87	524.30	....
568.39	130.90	133.13	17.64	1,557.24	1,765.08	207.84	....
5,934.89	1,140.35	1,389.26	257.52	14,521.82	15,900.39	1,378.57	....
69,566.15	12,182.00	16,233.91	3,408.41	172,059.18	175,944.23	3,885.05	....
57,425.11	5,245.74	13,347.19	4,554.41	157,470.33	156,734.17	....	736 16
4,074.11	512.54	951.76	278.95	11,457.35	12,706.67	1,249.32	.....
4,525.11	848.63	1,057.36	202.04	11,765.78	12,474.48	708.70	......
2,783.28	585.90	651.79	102.26	7,252.01	8,004.39	752.38	......
1,527.65	325.25	358.34	56.91	3,918.67	4,666.26	747.59	.....
6,097.54	1,220.24	1,426.84	246.80	15,563.81	17,107.32	1,543.51	.....
13,002.85	2,148.49	3,030.72	667.87	32,612.55	32,899.42	286 87	....
3,053.13	761.27	716.20	79.38	7,173.95	8,918.83	1,744.88	....
13,028.28	2,636.31	3,050.79	510.29	33,214.44	37,346.03	4,131.59	
1,447.21	342.30	339.40	43.47	3,621.08	3,890.74	269.66	
12,989.78	2,404.10	3,039.86	574.95	36,604 97	38,991.74	2,386.77	
16,183.80	2,625.06	3,776.88	895.60	41,117.80	44,417.88	3,300.08	
7,566.44	1,360.12	1,770.58	361.94	20,025.55	21,613.16	1,587.61	

NIAGARA

Statement showing the amount chargeable (upon annual adjustment) to each it by the Commission; the amount received by the Commission or charged to each Municipality in respect of power

Municipality	Interim rates per horsepower collected by Commission during year		Share of capital cost of system	Average horsepower supplied in year after correction for power factor	Share of operating	
	To Dec. 31, 1938	From Jan. 1, 1939			Cost of power purchased	Operating, maintenance and administrative expenses
	$ c.	$ c.	$ c.		$ c.	$ c.
Port Dalhousie	25.50	25.50	151,700.33	745.9	5,047.18	3,472.09
Port Dover	33.50	32.50	106,309.68	386.6	2,615.95	2,275.91
Port Rowan	50.50	45.00	26,174.53	82.2	556.21	598.97
Port Stanley	34.50	34.50	137,158.68	475.9	3,220.21	3,699.32
Preston	22.50	24.00	619,612.72	2,961.1	20,036.46	12,814.70
Princeton	40.50	40.50	40,528.56	106.8	722.67	1,319.16
Queenston	24.50	24.50	21,356.04	123.5	835.67	481.04
Richmond Hill	30.50	30.50	93,670.53	403.7	2,731.66	2,765.08
Ridgetown	33.50	33.50	141,544.40	537.3	3,635.67	3,735.51
Riverside	29.50	29.50	249,111.08	923.4	6,248.24	5,309.24
Rockwood	35.50	35.50	32,711.38	113.6	768.68	942.70
Rodney	45.00	44.00	54,831.50	165.6	1,120.54	1,911.99
St. Catharines	18.50	20.00	2,395,750.02	13,879.8	93,918.52	42,847.55
St. Clair Beach	35.50	35.50	24,920.25	82.6	558.92	894.18
St. George	35.50	35.50	43,726.49	147.0	994.68	1,138.17
St. Jacobs	29.50	29.50	74,692.92	312.4	2,113.87	1,651.93
St. Marys	31.50	30.50	342,378.91	1,406.9	9,519.87	10,496.38
St. Thomas	23.50	23.50	1,585,695.17	7,594.5	51,388.65	31,742.81
Sarnia	28.50	28.50	2,004,971.65	7,975.9	53,969.42	45,412.50
Scarboro twp	27.50	27.50	823,645.04	3,584.9	24,257.45	15,085.14
Seaforth	30.50	30.50	130,126.04	510.3	3,452.98	3,417.99
Simcoe	25.50	25.50	473,024.38	2,153.2	14,569.76	10,034.46
Springfield	43.50	43.50	21,492.88	59.7	403.96	634.77
Stamford twp	17.50	17.50	314,296.22	2,265.3	15,328.29	6,126.64
Stouffville	40.50	40.50	70,258.36	239.6	1,621.27	2,096.01
Stratford	25.50	25.50	1,571,230.56	7,079.3	47,902.52	33,860.67
Strathroy	29.50	29.50	298,396.51	1,226.9	8,301.89	6,023.87
Streetsville	35.50	34.00	32,314.71	137.1	927.70	1,144.50
Sutton	47.50	43.00	78,210.48	240.5	1,627.36	2,697.43
Swansea	29.00	29.00	508,474.44	2,525.8	17,090.98	17,418.05
Tavistock	31.50	31.50	146,253.57	575.2	3,892.13	3,585.03
Tecumseh	32.50	32.50	84,230.44	291.0	1,969.07	2,344.45
Thamesford	35.50	34.00	56,026.18	198.6	1,343.84	1,379.15
Thamesville	35.50	35.50	58,727.03	221.9	1,501.50	1,790.09
Thedford	62.50	55.00	34,138.96	79.2	535.91	1,321.19

SYSTEM *N—COST OF POWER*

Municipality as the Cost—under Power Commission Act—of Power supplied to from each Municipality, and the amount remaining to be credited supplied to it in the year ended October 31, 1939

costs and fixed charges			Revenue received in excess of cost of power sold to private companies	Amount charged to each municipality in respect of power supplied to it in the year	Amount received from (or billed against) each municipality by the Commission	Amounts remaining to be credited or charged to each municipality	
Interest	Provision for renewals	Provision for sinking fund	Credit			Credited	Charged
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
6,815.01	1,135.05	1,592.02	368.46	17,692.89	19,019.59	1,326.70	....
4,630.48	926.34	1,085.64	190.98	11,343.34	12,626.73	1,283.39	....
1,161.49	260.59	275.49	40.61	2,812.14	3,774.95	962.81	....
6,158.88	1,285.20	1,440.56	235.09	15,569.08	16,419.40	850.32	....
28,010.22	4,535.69	6,520.85	1,462.74	70,455.18	70,320.97	....	134.21
1,482.99	324.13	347.80	52.76	4,143.99	4,325.73	181.74	....
961.02	135.81	224.80	61.01	2,577.33	3,026.14	448.81	....
4,207.06	722.54	985.12	199.42	11,212.04	12,313.60	1,101.56	....
6,382.05	1,238.75	1,490.28	265.42	16,216.84	18,000.10	1,783.26	....
11,229.80	2,182.83	2,620.55	456.15	27,134.51	27,239.55	105.04	....
1,472.32	308.58	344.36	56.12	3,780.52	4,032.78	252.26	....
2,463.93	555.20	577.09	81.80	6,546,95	7,314.62	767.67	....
108,217.22	14,714.67	25,127.11	6,856.43	277,968.64	274,010.57	....	3,958.07
1,123.77	234.81	262.18	40.80	3,033.06	2,930.49	....	102.57
1,882.21	392.64	441.16	72.62	4,776.24	5,219.08	442.84	....
3,358.27	617.26	786.13	154.32	8,373.14	9,216.77	843.63	....
15,386.89	2,789.01	3,601.62	694.99	41,098.78	43,138.53	2,039.75	....
71,513.22	11,528.58	16,684.12	3,751.58	179,105.80	178,469.75	....	636.05
90,328.40	16,842.79	21,089.77	3,939.98	223,702.90	227,313.93	3,611.03	....
37,067.79	6,298.74	8,665.50	1,770.89	89,603.73	98,584.73	8,981.00	....
5,871.77	1,121.03	1,369.41	252.08	14,981.10	15,563.57	582.47	....
21,315.65	3,636.42	4,977.49	1,063.65	53,470.13	54,906.81	1,436.68	....
966.37	225.52	225.85	29.49	2,426.98	2,594.77	167.79	....
14,355.12	1,329.80	3,308.15	1,119.03	39,328.97	39,643.47	314.50	....
3,149.09	648.86	739.13	118.36	8,136.00	9,702.46	1,566.46	....
70,843.18	12,042.01	16,533.68	3,497.08	177,684.98	180,521.64	2,836.66	....
13,390.18	2,488.94	3,135.13	606.07	32,733.94	36,192.06	3,458.12	....
1,451.29	267.79	340.63	67.73	4,064.18	4,699.71	635.53	....
3,482.84	763.95	820.99	118.80	9,273.77	10,475.53	1,201.76	....
22,854.21	3,360.31	5,348.96	1,247.71	64,824.80	73,247.21	8,422.41	....
6,569.94	1,255.26	1,537.71	284.14	16,555.93	18,120.10	1,564.17	....
3,798.61	773.79	886.13	143.75	9,628.30	9,456.14	....	172.16
2,462.41	501.84	576.95	98.11	6,166.08	6,802.28	636.20	....
2,644.11	515.65	618.32	109.62	6,960.05	7,877.73	917.68	....
1,521.61	379.37	358.33	39.12	4,077.29	4,472.42	395.13	....

NIAGARA

Statement showing the amount chargeable (upon annual adjustment) to each it by the Commission; the amount received by the Commission or charged to each Municipality in respect of power

Municipality	Interim rates per horsepower collected by Commission during year		Share of capital cost of system	Average horse-power supplied in year after correction for power factor	Share of operating	
	To Dec. 31, 1938	From Jan. 1, 1939			Cost of power pur-chased	Operating, main-tenance and adminis-trative expenses
	$ c.	$ c.	$ c.		$ c.	$ c.
Thorndale	60.50	50.00	20,999.69	62.9	425.62	677.95
Thorold	20.50	21.00	395,449.44	2,183.6	14,775.46	8,007.03
Tilbury	33.50	33.50	144,603.95	541.5	3,664.09	4,114.89
Tillsonburg	28.50	28.50	306,689.68	1,291.5	8,739.01	6,892.34
Toronto	21.60	22.60	62,233,019.91	310,080.1	2,098,176.00	1,069.626.62
Toronto twp.	27.50	27.50	557,584.34	2,426.3	16,417.71	14,566.61
Trafalgar twp. (area No. 1)	26.50	26.50	96,005.91	410.1	2,774.97	2,183.78
Trafalgar twp. (area No. 2)	27.50	27.50	32,310.62	128.0	866.11	755.77
Wallaceburg	31.50	31.50	598.276.32	2,289.9	15,494.75	17,089.00
Wardsville	57.50	57.50	13,487.87	37.2	251.72	578.53
Waterdown	27.50	27.50	51,546.68	223.0	1,508.94	1,164.75
Waterford	27.50	27.50	95,787.72	412.5	2,791.21	2,069.62
Waterloo	22.50	24.00	845,463.79	3,963.6	26,819.94	16,563.34
Watford	45.50	45.50	91,467.61	284.2	1,923.06	2,646.02
Welland	19.50	19.50	911,106.79	5,765.4	39,011.93	17,003.51
Wellesley	45.50	44.00	33,249.04	104.4	706.43	792.56
West Lorne	36.50	36.50	35,244.63	126.7	857.32	1,335.26
Weston	22.50	23.00	739,204.21	3,611.0	24,434.05	14,164.07
Wheatley	48.50	45.00	61,573.56	169.0	1,143.55	1,425.53
Windsor	26.00	26.00	8,630,870.59	37,083.5	250,927.78	146,262.89
Woodbridge	30.50	30.50	114,043.98	471.7	3,191.79	2,397.93
Woodstock	23.50	24.50	1,383,372.50	6,458.7	43,703.19	27,768.05
Wyoming	47.50	47.50	25,764.20	69.3	468.92	803.93
York twp., East	27.50	27.50	1,315,730.32	6,522.4	44,134.22	56,702.44
York twp., North	27.50	27.50	963,506.64	4,316.5	29,207.86	26,136.65
Zurich	57.50	55.00	38,044.65	96.1	650.27	1,059.22
Ontario Reformatory			66,563.10	298.5	2,019.82	1,488.40
Toronto Transportation Commission			82,186.27	398.8	2,698.50	1,556.92
Totals—Municipalities			151,320,994.90	729,550.3	4,936,546.85	2,865,978.44
Totals—Rural power districts			11,192,574.59	44,935.7	304,060.28	259,987.66
Totals—Companies			39,554,054.94	225,885.4	1,528,467.31	903,282.97
Totals—Local distribution systems			1,379,074.01	4,676.2	31,641.79	71,672.85
			203,446,698.44			
Non-operating capital			623,152.91			
Grand Totals			204,069,851.35	1,005,047.6	6,800,716.23	4,100,921.92

SYSTEM *N—COST OF POWER*

Municipality as the Cost—under Power Commission Act—of power supplied to from each Municipality, and the amount remaining to be credited supplied to it in the year ended October 31, 1939

costs and fixed charges			Revenue received in excess of cost of power sold to private companies	Amount charged to each municipality in respect of power supplied to it in the year	Amount received from (or billed against) each municipality by the Commission	Amounts remaining to be credited or charged to each municipality	
Interest	Provision for renewals	Provision for sinking fund	Credit			Credited	Charged
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
918.96	212.90	220.61	31.07	2,424.97	3,248.57	823.60	....
17,848.71	2,599.75	4,152.98	1,078.67	46,305.26	45,677.51	....	627.75
6,512.68	1,276.33	1,521.51	267.49	16,822.01	18,141.69	1,319.68	....
13,864.09	2,540.13	3,240.82	637.98	34,638.41	36,807.52	2,169.11	....
2,811,989.23	409,679.89	654,666.46	153,175.36	6,890,962.84	6,947,568.00	56,605.16	....
25,092.53	4,492.99	5,855.47	1,198.56	65,226.75	66,723.45	1,496.70	....
4,332.29	788.69	1,010.26	202.58	10,887.41	10,867.41	....	20.00
1,437.24	274.17	334.98	63.23	3,605.04	3,519.06	....	85.98
26,943.39	5,206.82	6,300.43	1,131.18	69,903.21	72,130.81	2,227.60	....
602.92	141.26	142.14	18.38	1,698.19	2,139.95	441.76	....
2,314.81	417.08	541.48	110.16	5,836.90	6,132.19	295.29	....
4,315.19	774.16	1,007.98	203.77	10,754.39	11,343.83	589.44	....
38,205.63	6,296.53	8,896.51	1,957.96	94,823.99	94,144.93	....	679.06
4,148.44	913.48	971.44	140.39	10,462.05	12,931.07	2,469.02	....
41,182.73	5,035.30	9,589.78	2,848.03	108,975.22	112,424.33	3,449.11	....
1,530.27	343.25	358.87	51.58	3,679.80	4,625.80	946.00	
1,586.47	324.20	370.91	62.59	4,411.57	4,623.93	212.36	....
33,398.92	5,350.72	7,776.64	1,783.78	83,340.62	82,749.88	....	590.74
2,751.74	637.77	646.88	83.48	6,521.99	7,702.01	1,180.02	....
388,335.77	67,059.17	90,777.48	18,318.74	925,044.35	964,170.89	39,126.54	....
5,118.67	961.20	1,199.95	233.01	12,636.53	14,387.10	1,750.57	....
62,720.77	10,443.00	14,620.66	3,190.51	156,065.16	157,149.50	1,084.34	....
1,159.45	271.57	271.15	34.23	2,940.79	3,292.93	352.14	....
59,383.23	8,717.72	13,841.02	3,221.98	179,556.65	179,365.52	....	191.13
43,117.86	7,089.53	10,060.87	2,132.29	113,480.48	118,704.43	5,223.95	....
1,701.63	414.31	399.55	47.47	4,177.51	5,326.43	1,148.92	....
2,993.09	519.54	700.37	147.45	7,573.77	8,060.14	486.37	....
3,666.13	599.15	864.63	197.00	9,188.33	11,676.34	2,488.01	....
6,829,212.36	1,071,407.90	1,591,311.73	(358,853.04)	16,935,604.24	17,118,446.64	303,170.42	120,328.02
500,997.65	93,964.99	116,820.86	(22,197.61)	1,253,633.83	1,253,633.83		
1,783,366.88	240,047.69	466,235.71	382,720.07	5,304,120.63	5,304,120.63		
61,811.45	11,841.54	14,413.00	(1,669.42)	189,711.21	189,711.21		
9,175,388.34	1,417,262.12	2,188,781.30	....	23,683,069.91	23,865,912.31	303,170.42	120,328.02

NIAGARA

Statement showing the net Credit or Charge to each Municipality in respect of and adjustments made during the year. Also the net amount Credited ended October 31, 1939, and the accumulated amount standing

Municipality	Date commenced operating	Net credit or charge at October 31, 1938	
		Credit	Charge
		$ c.	$ c.
Acton	Jan. 1913		640.98
Agincourt	Nov. 1922	439.08	
Ailsa Craig	Jan. 1916	654.50	
Alvinston	April 1922	561.46	
Amherstburg	Nov. 1925	2,533.12	
Ancaster twp	May 1923	68.82	
Arkona	Dec. 1926	433.09	
Aylmer	Mar. 1918	1,941.64	
Ayr	Jan. 1915	266.61	
Baden	May 1912	365.50	
Beachville	Aug. 1912	632.29	
Beamsville	May 1937	860.41	
Belle River	Dec. 1922	705.11	
Blenheim	Nov. 1915	786.84	
Blyth	July 1924	748.54	
Bolton	Feb. 1915	702.96	
Bothwell	Sept. 1915	469.95	
Brampton	Nov. 1911	4,382.99	
Brantford	Feb. 1914		7,856.01
Brantford twp	May 1924	695.46	
Bridgeport	Mar. 1928	91.21	
Brigden	Jan. 1918	733.14	
Brussels	July 1924	625.41	
Burford	June 1915	462.51	
Burgessville	Nov. 1916	157.59	
Caledonia	Oct. 1912	585.11	
Campbellville	Jan. 1925	226.17	
Cayuga	Nov. 1924	645.14	
Chatham	Feb. 1915	6,752.65	
Chippawa	Sept. 1919	135.89	
Clifford	May 1924	354.50	
Clinton	Mar. 1914		319.05
Comber	May 1915	320.49	
Cottam	Nov. 1926	196.59	
Courtright	Dec. 1923	294.64	
Dashwood	Sept. 1917	587.22	
Delaware	Mar. 1915	382.31	
Delhi	May 1938	139.54	
Dorchester	Dec. 1914	476.46	
Drayton	Mar. 1918	581.89	
Dresden	April 1915	2,026.99	
Drumbo	Dec. 1914	385.84	
Dublin	Oct. 1917	430.43	
Dundas	Jan. 1911	992.02	
Dunnville	June 1918	2,843.50	

SYSTEM *N—CREDIT OR CHARGE*

power supplied to it to October 31, 1938, the cash receipts and payments thereon or Charged to each Municipality in respect of power supplied in the year as a Credit or Charge to each Municipality at October 31, 1939

Cash receipts and payments on account of such credits and charges, also adjustments made during the year		Net amount credited or charged in respect of power supplied in the year ended October 31, 1939		Accumulated amount standing as a credit or charge on October 31, 1939	
Credited	Charged	Credited	Charged	Credit	Charge
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
640.98		433.24		433.24	
	439.08	850.05		850.05	
	654.50	579.91		579.91	
	561.46	1,539.20		1,539.20	
	2,533.12	1,800.95		1,800.95	
	68.82	563.91		563.91	
	433.09	340.35		340.35	
	1,941.64	1,339.98		1,339.98	
	266.61	185.30		185.30	
	365.50	285.32		285.32	
	632.29	227.04		227.04	
	860.41	834.41		834.41	
	705.11	401.28		401.28	
	786.84	2,078.37		2,078.37	
	748.54	602.01		602.01	
	702.96	1,065.97		1,065.97	
	469.95	684.80		684.80	
	4,382.99	4,627.72		4,627.72	
7,856.01			3,866.50		3,866.50
	695.46	268.80		268.80	
	91.21	303.55		303.55	
	733.14	749.16		749.16	
	625.41	519.12		519.12	
	462.51	364.01		364.01	
	157.59	297.46		297.46	
	585.11	162.78		162.78	
	226.17	373.28		373.28	
	645.14	596.28		596.28	
	6,752.65	5,494.65		5,494.65	
	135.89	625.95		625.95	
	354.50	627.14		627.14	
319.05		991.56		991.56	
	320.49	58.80		58.80	
	196.59	336.24		336.24	
	294.64	487.36		487.36	
	587.22	631.57		631.57	
	382.31	326.79		326.79	
	139.54	2,966.20		2,966.20	
	476.46	501.55		501.55	
	581.89	597.70		597.70	
	2,026.99	1,014.10		1,014.10	
	385.84	308.95		308.95	
	430.43	374.81		374.81	
	992.02		466.28		466.28
	2,843.50	5,171.13		5,171.13	

NIAGARA

Statement showing the net Credit or Charge to each Municipality in respect of and adjustments made during the year. Also the net amount Credited ended October 31, 1939, and the accumulated amount standing

Municipality	Date commenced operating	Net credit or charge at October 31, 1938	
		Credit	Charge
		$ c.	$ c.
Dutton	Sept. 1915	734.62	
Elmira	Nov. 1913	2,899.55	
Elora	Nov. 1914	505.36	
Embro	Jan. 1915	873.24	
Erieau	July 1924	500.79	
Erie Beach	July 1925	273.31	
Essex	Nov. 1923	928.93	
Etobicoke twp.	Aug. 1917	231.39	
Exeter	June 1916	1,246.23	
Fergus	Nov. 1914	3,728.39	
Fonthill	June 1926	71.16	
Forest	Mar. 1917	2,060.38	
Forest Hill Village	Jan. 1938	7,308.80	
Galt	May 1911		8,556.50
Georgetown	Sept. 1913	1,281.80	
Glencoe	Aug. 1920	1,060.21	
Goderich	Feb. 1914	2,400.73	
Granton	July 1916	598.13	
Guelph	Dec. 1910	1,234.96	
Hagersville	Sept. 1913	239.16	
Hamilton	Feb. 1911		105,107.37
Harriston	July 1916	1,510.48	
Harrow	Nov. 1923	1,391.90	
Hensall	Jan. 1917	776.99	
Hespeler	Feb. 1911	1,256.67	
Highgate	Dec. 1916	195.00	
Humberstone	Oct. 1924	82.09	
Ingersoll	May 1911		852.84
Jarvis	Feb. 1924	139.72	
Kingsville	Nov. 1923	2,048.43	
Kitchener	Jan. 1911		10,021.44
Lambeth	April 1915	462.64	
LaSalle	Nov. 1925	321.35	
Leamington	Nov. 1923	6,333.18	
Listowel	June 1916	3,358.25	
London	Jan. 1916		6,827.13
London twp.	Jan. 1925	1,199.94	
Long Branch	Jan. 1931	554.11	
Lucan	Feb. 1915	619.01	
Lynden	Nov. 1915	281.44	
Markham	April 1920	636.22	
Merlin	Dec. 1922	235.32	
Merritton	Nov. 1920		4,897.29
Milton	April 1913	1,538.00	
Milverton	June 1916	631.26	

SYSTEM *N—CREDIT OR CHARGE*

power supplied to it to October 31, 1938, the cash receipts and payments thereon or Charged to each Municipality in respect of power supplied in the year as a Credit or Charge to each Municipality at October 31, 1939

Cash receipts and payments on account of such credits and charges, also adjustments made during the year		Net amount credited or charged in respect of power supplied in the year ended October 31, 1939		Accumulated amount standing as a credit or charge on October 31, 1939	
Credited	Charged	Credited	Charged	Credit	Charge
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
	734.62	593.26		593.26	
	2,899.55	1,835.43		1,835.43	
	505.36	345.46		345.46	
	873.24	625.72		625.72	
	500.79	815.63		815.63	
	273.31	130.46		130.46	
	928.93	862.94		862.94	
	231.39	96.02		96.02	
	1,246.23	1,999.80		1.999.80	
	3,728.39	2,786.50		2,786.50	
	71.16	678.42		678.42	
	2,060.38	1,986.60		1.986.60	
	7,308.80	14,824.19		14.824.19	
8.556.50			3,012.23		3,012.23
	1,281.80	2,933.47		2,933.47	
	1,060.21	1,060.24		1,060.24	
	2,400.73	4,535.96		4,535.96	
	598.13	481.23		481.23	
	1,234.96		5,112.56		5,112.56
	239.16	31.29		31.29	
105,107.37			82,793.30		82,793.30
	1,510.48	1,661.52		1.661.52	
	1,391.90	1,444.70		1.444.70	
	776.99	1,370.54		1.370.54	
	1,256.67	864.38		864.38	
	195.00	409.27		409.27	
	82.09	694.18		694.18	
852.84			277.90		277.90
	139.72		12.91		12.91
	2.048.43	2.037.87		2.037.87	
10.021.44			3.550.45		3.550.45
	462.64	547.71		547.71	
	321.35	314.37		314.37	
	6,333.18	3,816.73		3,816.73	
	3.358.25	2.933.06		2.933.06	
6.827.13			11.312.62		11.312.62
	1,199.94	1,275.60		1.275.60	
	554.11	674.72		674.72	
	619.01	663.68		663.68	
	281.44	240.90		240.90	
	636.22	1,012.40		1.012.40	
	235.32	345.79		345.79	
4,897.29			667.24		667.24
	1.538.00	2.572.13		2.572.13	
	631.26	803.78		803.78	

NIAGARA

Statement showing the net Credit or Charge to each Municipality in respect of and adjustments made during the year. Also the net amount Credited ended October 31, 1939, and the accumulated amount standing

Municipality	Date commenced operating	Net credit or charge at October 31, 1938	
		Credit	Charge
		$ c.	$ c.
Mimico	May 1912	....	2,618.25
Mitchell	Sept. 1911	705.57	....
Moorefield	Mar. 1918	221.78	....
Mount Brydges	Mar. 1915	319.95	....
Newbury	Mar. 1921	153.46	....
New Hamburg	Mar. 1911	1,364.15	....
New Toronto	Feb. 1914	3,455.98	....
Niagara Falls	Dec. 1915	....	12,282.51
Niagara-on-the-Lake	Aug. 1919	471.08	....
Norwich	May 1912	588.66	....
Oil Springs	Feb. 1918	733.22	....
Otterville	Feb. 1916	530.33	....
Palmerston	July 1916	1,571.29	....
Paris	Feb. 1914	....	342.93
Parkhill	May 1920	1,160.83	....
Petrolia	May 1916	3,299.24	....
Plattsville	Dec. 1914	477.57	....
Point Edward	Nov. 1916	2,856.01	....
Port Colborne	Mar. 1920	828.48	....
Port Credit	Aug. 1912	1,571.70	....
Port Dalhousie	Nov. 1912	756.04	....
Port Dover	Dec. 1921	1,440.92	....
Port Rowan	Nov. 1926	1,046.18	....
Port Stanley	April 1912	1,340.18	....
Preston	Jan. 1911	....	2,697.21
Princeton	Jan. 1915	483.69	....
Queenston	Mar. 1921	189.29	....
Richmond Hill	June 1925	821.37	....
Ridgetown	Dec. 1915	578.94	....
Riverside	Nov. 1922	525.28	....
Rockwood	Sept. 1913	323.60	....
Rodney	Feb. 1917	634.58	....
St. Catharines	April 1914	....	26,572.95
St. Clair Beach	Nov. 1922	38.22	....
St. George	Sept. 1915	568.26	....
St. Jacobs	Sept. 1917	775.00	....
St. Marys	May 1911	3,537.03	....
St. Thomas	April 1911	2,310.59	....
Sarnia	Dec. 1916	7,123.51	....
Scarboro twp	Aug. 1918	5,900.33	....
Seaforth	Nov. 1911	66.17	....
Simcoe	Aug. 1915	1,860.89	....
Springfield	Aug. 1917	102.22	....
Stamford twp	Nov. 1916	....	5,435.72
Stouffville	Sept. 1923	991.04	....

power supplied to it to October 31, 1938, the cash receipts and payments thereon or Charged to each Municipality in respect of power supplied in the year as a Credit or Charge to each Municipality at October 31, 1939

Cash receipts and payments on account of such credits and charges, also adjustments made during the year		Net amount credited or charged in respect of power supplied in the year ended October 31, 1939		Accumulated amount standing as a credit or charge on October 31, 1939	
Credited	Charged	Credited	Charged	Credit	Charge
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
2,618.25			1,322.15		1,322.15
	705.57	349.58		349.58	
	221.78	218.36		218.36	
	319.95	524.30		524.30	
	153.46	207.84		207.84	
	1,364.15	1,378.57		1,378.57	
	3,455.98	3,885.05		3,885.05	
12,282.51			736.16		736.16
	471.08	1,249.32		1,249.32	
	588.66	708.70		708.70	
	733.22	752.38		752.38	
	530.33	747.59		747.59	
	1,571.29	1,543.51		1,543.51	
342.93		286.87		286.87	
	1,160.83	1,744.88		1,744.88	
	3,299.24	4,131.59		4,131.59	
	477.57	269.66		269.66	
	2,856.01	2,386.77		2,386.77	
	828.48	3,300.08		3,300.08	
	1,571.70	1,587.61		1,587.61	
	756.04	1,326.70		1,326.70	
	1,440.92	1,283.39		1,283.39	
	1,046.18	962.81		962.81	
	1,340.18	850.32		850.32	
2,697.21			134.21		134.21
	483.69	181.74		181.74	
	189.29	448.81		448.81	
	821.37	1,101.56		1,101.56	
	578.94	1,783.26		1,783.26	
	525.28	105.04		105.04	
	323.60	252.26		252.26	
	634.58	767.67		767.67	
26,572.95			3,958.07		3,958.07
	38.22		102.57		102.57
	568.26	442.84		442.84	
	775.00	843.63		843.63	
	3,537.03	2,039.75		2,039.75	
	2,310.59		636.05		636.05
	7,123.51	3,611.03		3,611.03	
	5,900.33	8,981.00		8,981.00	
	66.17	582.47		582.47	
	1,860.89	1,436.68		1,436.68	
	102.22	167.79		167.79	
2,031.69		314.50			3,089.53
	991.04	1,566.46		1,566.46	

NIAGARA

Statement showing the net Credit or Charge to each Municipality in respect of and adjustments made during the year. Also the net amount Credited ended October 31, 1939, and the accumulated amount standing

Municipality	Date commenced operating	Net credit or charge at October 31, 1938	
		Credit	Charge
		$ c.	$ c.
Stratford	Jan. 1911	4,024.83	....
Strathroy	Dec. 1914	3,216.65	....
Streetsville	Dec. 1934	571.08	....
Sutton	Aug. 1923	2,257.18	....
Swansea	Oct. 1937	6,434.84	....
Tavistock	Nov. 1916	1,509.32	....
Tecumseh	Nov. 1922	102.47	....
Thamesford	Feb. 1914	829.75	....
Thamesville	Oct. 1915	459.65	....
Thedford	May 1922	982.34	....
Thorndale	Mar. 1914	1,238.38	....
Thorold	Jan. 1921	....	2,326.33
Tilbury	April 1915	752.70	....
Tillsonburg	Aug. 1911	2,031.38	....
Toronto	June 1911	....	305,756.39
Toronto twp.	Aug. 1913	1,194.57	....
Trafalgar twp. (Area No. 1)	Nov. 1937	17.77	....
Trafalgar twp. (Area No. 2)	Nov. 1937	....	39.50
Wallaceburg	Feb. 1915	4,629.71	....
Wardsville	June 1921	370.19	....
Waterdown	Nov. 1911	445.10	....
Waterford	April 1915	497.85	....
Waterloo	Dec. 1910	....	3,234.13
Watford	Sept. 1917	1,103.82	....
Welland	Sept. 1917	....	3,319.29
Wellesley	Nov. 1916	511.78	....
West Lorne	Jan. 1917	274.44	....
Weston	Jan. 1911	....	1,201.34
Wheatley	Feb. 1924	1,263.07	....
Windsor	Oct. 1914	58,745.68	....
Woodbridge	Dec. 1914	1,614.66	....
Woodstock	Jan. 1911	....	1,190.93
Wyoming	Nov. 1916	208.77	....
York East twp.	July 1925	....	1,204.09
York North twp.	Nov. 1923	1,747.87	....
Zurich	Sept. 1917	674.78	....
Ontario Central Reformatory	Sept. 1913	647.21	....
Toronto Transportation Commission	Jan. 1927	2,347.59	....
Sandwich, Windsor & Amherstburg Railway	....	31,821.02	....
Totals—Municipalities	....	273,673.83	513,300.18
Totals—Rural power districts	....	1,418,017.63	287,187.09
Grand totals	....	1,691,691.46	800,487.27

SYSTEM *N—CREDIT OR CHARGE*

power supplied to it to October 31, 1938, the cash receipts and payments thereon or Charged to each Municipality in respect of power supplied in the year as a Credit or Charge to each Municipality at October 31, 1939

Cash receipts and payments on account of such credits and charges, also adjustments made during the year		Net amount credited or charged in respect of power supplied in the year ended October 31, 1939		Accumulated amount standing as a credit or charge on October 31, 1939	
Credited	Charged	Credited	Charged	Credit	Charge
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
	4,024.83	2,836.66		2,836.66	
	3,216.65	3,458.12		3,458.12	
	571.08	635.53		635.53	
	2,257.18	1,201.76		1,201.76	
	6,434.84	8,422.41		8,422.41	
	1,509.32	1,564.17		1,564.17	
	102.47		172.16		172.16
	829.75	636.20		636.20	
	459.65	917.68		917.68	
	982.34	395.13		395.13	
	1,238.38	823.60		823.60	
2,326.33			627.75		627.75
	752.70	1,319.68		1,319.68	
	2,031.38	2,169.11		2,169.11	
305,756.39		56,605.16		56,605.16	
	1,194.57	1,496.70		1,496.70	
	17.77		20.00		20.00
39.50			85.98		85.98
	4,629.71	2,227.60		2,227.60	
	370.19	441.76		441.76	
	445.10	295.29		295.29	
	497.85	589.44		589.44	
3,234.13			679.06		679.06
	1,103.82	2,469.02		2,469.02	
3,319.29		3,449.11		3,449.11	
	511.78	946.00		946.00	
	274.44	212.36		212.36	
			590.74		1,792.08
	1,263.07	1,180.02		1,180.02	
	58,745.68	39,126.54		39,126.54	
	1,614.66	1,750.57		1,750.57	
1,190.93		1,084.34		1,084.34	
	208.77	352.14		352.14	
1,204.09			191.13		191.13
	1,747.87	5,223.95		5,223.95	
	674.78	1,148.92		1,148.92	
	647.21	486.37		486.37	
	2,347.59	2,488.01		2,488.01	
	31,821.02				
508,694.81	273,673.83	303,170.42	120,328.02	302,855.92	124,618.89
56,719.55	12,007.38	194,919.37	86,240.78	1,652,230.03	368,008.73
565,414.36	285,681.21	498,089.79	206,568.80	1,955,085.95	492,627.62

NIAGARA SYSTEM *SINKING FUND*

Statement showing Sinking Fund paid by each Municipality in the periods mentioned hereunder, as part of the cost of power delivered thereto, together with the proportionate share of other sinking funds provided out of other revenues of the system, and interest allowed thereon to October 31, 1939

Municipality	Period of years ending Oct. 31, 1939	Amount	Municipality	Period of years ending Oct. 31, 1939	Amount
		$ c.			$ c.
Acton	22 years	65,467.80	Dutton	19 years	18,995.85
Agincourt	15 "	10,600.51	Elmira	21 "	74,523.87
Ailsa Craig	19 "	14,896.60	Elora	20 "	35,800.44
Alvinston	16 "	14,905.50	Embro	20 "	10,876.81
Amherstburg	22 "	51,234.95	Erieau	16 "	6,094.18
Ancaster twp.	16 "	16,231.08	Erie Beach	15 "	1,540.01
Arkona	13 "	5,902.71	Essex	16 "	29,651.16
Aylmer	16 "	40,941.12	Etobicoke twp	17 "	202,578.94
Ayr	20 "	14,292.87	Exeter	18 "	40,104.49
Baden	22 "	30,955.70	Fergus	20 "	58,949.59
Beachville	22 "	39,429.86	Fonthill	14 "	5,919.26
Beamsville	3 "	3,080.31	Forest	17 "	31,461.66
Belle River	17 "	9,895.94	Forest Hill Village	16 "	150,256.56
Blenheim	19 "	36,230.56	Galt	23 "	521,404.95
Blyth	16 "	9,317.39	Georgetown	21 "	98,529.52
Bolton	19 "	16,916.56	Glencoe	16 "	19,511.71
Bothwell	19 "	16,889.33	Goderich	20 "	118,214.96
Brampton	23 "	164,683.18	Granton	18 "	7,812.55
Brantford	20 "	865,674.25	Guelph	23 "	636,533.95
Brantford twp.	15 "	32,262.12	Hagersville	21 "	73,610.35
Bridgeport	12 "	5,968.36	Hamilton	23 "	4,491,922.55
Brigden	17 "	11,489.72	Harriston	18 "	32,455.04
Brussels	16 "	12,547.52	Harrow	16 "	23,462.77
Burford	19 "	13,150.48	Hensall	18 "	15,724.36
Burgessville	18 "	5,155.99	Hespeler	23 "	108,385.58
Caledonia	22 "	21,747.21	Highgate	18 "	9,379.45
Campbellville	15 "	2,442.26	Humberstone	16 "	19,894.43
Cayuga	15 "	9,222.09	Ingersoll	23 "	176,663.91
Chatham	19 "	380,750.24	Jarvis	16 "	14,376.68
Chippawa	17 "	16,607.60	Kingsville	16 "	38,733.34
Clifford	16 "	6,717.41	Kitchener	23 "	1,240,656.14
Clinton	20 "	44,939.51	Lambeth	19 "	9,319.95
Comber	19 "	18,086.32	LaSalle	14 "	13,441.88
Cottam	13 "	4,120.58	Leamington	16 "	81,544.06
Courtright	16 "	5,472.89	Listowel	18 "	73,626.19
Dashwood	17 "	8,133.41	London	23 "	2,346,844.03
Delaware	19 "	3,086.15	London twp.	15 "	19,053.93
Delhi	2 "	2,180.26	Long Branch	9 "	23,573.96
Dorchester	20 "	7,272.88	Lucan	19 "	17,754.56
Drayton	16 "	12,044.24	Lynden	19 "	12,719.10
Dresden	19 "	30,637.35	Markham	16 "	18,050.95
Drumbo	20 "	6,305.13	Merlin	16 "	11,256.51
Dublin	17 "	5,493.44	Merritton	18 "	139,855.27
Dundas	23 "	134,604.08	Milton	21 "	96,470.39
Dunnville	16 "	59,435.52	Milverton	18 "	41,285.65

NIAGARA SYSTEM *SINKING FUND*

Statement showing Sinking Fund paid by each Municipality in the periods mentioned hereunder, as part of the cost of power delivered thereto, together with the proportionate share of other sinking funds provided out of other revenues of the system, and interest allowed thereon to October 31, 1939

Municipality	Period of years ending Oct. 31, 1939	Amount	Municipality	Period of years ending Oct. 31, 1939	Amount
		$ c.			$ c.
Mimico	22 years	134,745.68	Stratford	23 years	567,229.35
Mitchell	23 "	42,154.22	Strathroy	20 "	82,942.82
Moorefield	16 "	5,934.50	Streetsville	5 "	1,974.54
Mount Brydges	19 "	7,278.96	Sutton	16 "	15,166.82
Newbury	16 "	4,341.59	Swansea	14 "	70,089.51
New Hamburg	23 "	47,010.81	Tavistock	18 "	42,504.11
New Toronto	20 "	419,051.52	Tecumseh	17 "	24,182.46
Niagara Falls	19 "	545,286.27	Thamesford	20 "	16,017.35
Niagara-on-the-Lake	16 "	29,527.21	Thamesville	19 "	16,446.32
Norwich	22 "	34,883.10	Thedford	16 "	8,888.10
Oil Springs	16 "	23,731.37	Thorndale	20 "	8,072.97
Otterville	18 "	8,312.17	Thorold	17 "	93,528.88
Palmerston	18 "	40,758.56	Tilbury	19 "	43,411.73
Paris	20 "	106,436.56	Tillsonburg	23 "	82,416.37
Parkhill	16 "	17,957.64	Toronto	23 "	17,661,429.52
Petrolia	18 "	96,709.20	Toronto twp	21 "	102,843.54
Plattsville	20 "	8,585.50	Trafalgar twp. area 1	3 "	3,550.12
Point Edward	17 "	54,986.49	Trafalgar twp. area 2	3 "	1,127.54
Port Colborne	18 "	91,408.25	Wallaceburg	19 "	175,363.68
Port Credit	22 "	38,006.72	Wardsville	16 "	3,439.58
Port Dalhousie	18 "	33,524.30	Waterdown	23 "	21,413.58
Port Dover	16 "	24,093.50	Waterford	19 "	30,094.93
Port Rowan	13 "	6,338.62	Waterloo	23 "	245,077.62
Port Stanley	22 "	38,146.16	Watford	17 "	21,730.36
Preston	23 "	246,632.91	Welland	17 "	267,629.52
Princeton	20 "	8,701.47	Wellesley	18 "	15,496.79
Queenston	16 "	6,511.03	West Lorne	18 "	23,894.12
Richmond Hill	15 "	18,169.40	Weston	23 "	220,636.54
Ridgetown	19 "	40,062.29	Wheatley	16 "	12,510.58
Riverside	17 "	77,160.13	Windsor	20 "	2,846,439.01
Rockwood	21 "	10,676.75	Woodbridge	20 "	28,656.65
Rodney	17 "	12,639.77	Woodstock	23 "	373,021.85
St. Catharines	18 "	552,138.27	Wyoming	18 "	7,763.76
St. Clair Beach	17 "	6,360.78	York twp	19 "	582,715.07
St. George	19 "	13,327.31	York East twp	15 "	258,357.58
St. Jacobs	17 "	15,213.81	York North twp	16 "	132,845.43
St. Marys	23 "	125,978.53	Zurich	17 "	12,379.36
St. Thomas	23 "	464,937.70	Ontario Reformatory	5 "	4,526.15
Sarnia	18 "	583,786.77	Toronto Trans. Com.	18 "	171,856.90
Scarboro twp	16 "	173,952.74	Sandwich, Windsor & Amherstburg Ry. Co.	17 "	176,304.14
Seaforth	23 "	58,298.63			
Simcoe	19 "	98,351.25	Total—Municipalities		$42,468,173.15
Springfield	17 "	8,753.71	Total—Rural power districts		2,591,370.09
Stamford twp	18 "	91,628.77			
Stouffville	16 "	15,466.51	Grand total		$45,059,543.24

Rural Power Districts

Operating Account for Year Ended October 31, 1939

Revenue from customers in rural power districts		$2,834,782.69
Cost of power as provided to be paid under Power Commission Act	$1,253,633.83	
Cost of operation, maintenance and administration	716,779.89	
Interest	452,129.91	
Provision for renewals	198,134.37	
Provision for sinking fund	105,426.10	
		2,726,104.10
Balance		$ 108,678.59

NIAGARA SYSTEM—RURAL LINES

Statement showing Interest, Renewals, Contingencies and Obsolescence and Sinking Fund charged by the Commission to the Municipalities which operate the respective rural lines for the year ended October 31, 1939

Operated by	Capital cost	Interest	Provision for renewals	Provision for contingencies and obsolescence	Provision for sinking fund	Total interest, renewals, obsolescence, contingencies and sinking fund charged
	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
Milton.........	440.82	21.86	8.82	4.41	7.93	43.02
Welland........	19,617.60	823.94	392.35	196.18	353.12	1,765.59
Totals........	20,058.42	845.80	401.17	200.59	361.05	1,808.61

NIAGARA SYSTEM—RURAL LINES

Statement showing the total Sinking Fund in respect of each line, together with interest allowed thereon to October 31, 1939

	Period of years ended October 31, 1939	Amount
		$ c.
Milton..	26 years	330.29
Welland..	27 years	15,771.69
Total..................................	....	16,101.98

GEORGIAN BAY

Statement showing the amount to be paid by each Municipality as the Cost—under received by the Commission from each Municipality on account of such cost; upon ascertainment (by annual adjustment) of the actual Cost

Municipality	Interim rates per horsepower collected by Commission during year		Share of capital cost of system	Average horse-power supplied in year after correction for power factor	Share of operating		
	To Dec. 31 1938	From Jan. 1 1939			Cost of power pur-chased	Operating, main-tenance and adminis-trative expenses	Interest
	$ c.	$ c.	$ c.		$ c.	$ c.	$ c.
Alliston	51.00	48.00	111,543.00	316.0	227.41	4,212.83	5,234.58
Arthur	67.00	63.00	66,730.01	156.0	112.26	3,939.72	3,135.57
Barrie	32.50	32.50	779,477.29	3,262.2	2,347.60	34,579.79	36,752.29
Beaverton	40.00	40.00	63,453.92	234.5	168.76	3,229.45	2,979.43
Beeton	66.00	60.00	44,930.91	89.1	64.12	1,491.26	2,108.33
Bradford	55.00	50.00	69,187.04	188.0	135.29	2,864.65	3,253.89
Brechin	48.50	48.50	17,782.45	50.2	36.13	824.14	833.06
Cannington	40.50	40.50	45,466.90	163.0	117.30	2,385.81	2,141.99
Chatsworth	45.00	41.00	19,604.80	70.1	50.45	1,009.11	913.14
Chesley	35.50	35.50	143,518.01	529.6	381.12	6,280.45	6,777.64
Coldwater	36.50	35.00	71,148.86	274.2	197.32	2,985.51	3,332.32
Collingwood	39.00	37.00	368,694.30	1,384.7	996.48	15,763.14	17,257.57
Cookstown	50.00	45.00	25,085.16	76.2	54.84	1,178.79	1,169.83
Creemore	53.00	48.00	40,235.25	117.8	84.77	1,862.84	1,857.02
Dundalk	37.00	37.00	55,269.61	205.2	147.67	2,998.17	2,574.46
Durham	39.00	39.00	93,511.47	323.5	232.80	4,313.24	4,410.49
Elmvale	39.50	39.50	42,737.90	160.6	115.57	2,413.13	2,011.73
Elmwood	42.50	42.50	16,460.45	56.3	40.52	869.27	774.02
Flesherton	45.50	45.00	20,083.51	66.7	48.00	1,120.60	939.63
Grand Valley	53.00	53.00	48,686.38	135.5	97.51	2,872.70	2,294.96
Gravenhurst	25.00	25.00	183,480.98	913.9	....	8,472.08	8,655.86
Hanover	32.00	32.00	267,212.00	1,072.2	771.60	11,197.81	12,591.52
Holstein	80.00	80.00	8,773.23	15.9	11.44	520.77	417.35
Huntsville	28.00	28.00	272,076.81	1,074.5	....	11,371.05	11,929.73
Kincardine	46.50	45.00	215,004.28	652.6	469.64	8,470.50	10,092.91
Kirkfield	56.00	56.00	11,690.51	26.2	18.85	512.93	544.51
Lucknow	53.50	51.00	87,350.97	232.3	167.17	3,489.33	4,100.36
Markdale	37.00	37.00	45,793.06	176.4	126.94	2,322.55	2,141.41
Meaford	40.50	40.00	158,152.45	540.0	388.60	7,210.12	7,426.75
Midland	31.50	31.50	673,834.35	2,809.6	2,021.89	29,827.91	31,774.60
Mildmay	47.00	45.00	36,534.94	114.1	82.11	1,514.20	1,716 33
Mount Forest	44.00	44.00	146,528.56	481.7	346.65	8,099.81	6,959.57
Neustadt	65.00	55.00	13,435.48	33.8	24.32	535.56	624.20
Orangeville	44.00	44.00	198,661.74	614.5	442.22	9,575.04	9,352.70
Owen Sound	32.00	32.00	963,143.57	3,988.7	2,870.42	44,677.07	45,395.96

SYSTEM *G.B.—COST OF POWER*

the Power Commission Act—of power supplied to it by the Commission; the amount and the amount remaining to be credited or charged to each Municipality of Power supplied to it in the year ended October 31, 1939

costs and fixed charges				Cost in excess of revenue from power sold to private companies	Amount charged to each municipality in respect of power supplied to it in the year	Amounts received from (or billed against) each municipality by the Commission	Amounts remaining to be credited or charged to each municipality Credited (Charged)
Provision for renewals	Provision for contingencies and obsolescence	Provision for stabilization of rates	Provision for sinking fund				
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
1,569.46	394.70	948.00	1,172.29	62.15	13,821.42	15,330.84	1,509.42
1,007.28	232.40	468.00	701.13	30.68	9,627.04	9,936.26	309.22
8,753.82	3,056.80	9,786.60	8,180.48	641.58	104,098.96	106,021.21	1,922.25
775.11	244.01	703.50	664.83	46.12	8,811.21	9,379.63	568.42
712.12	151.46	267.30	472.48	17.52	5,284.59	5,444.85	160.26
992.54	246.89	564.00	728.40	36.97	8,822.63	9,553.74	731.11
248.51	66.45	150.60	185.80	9.87	2,354.56	2,435.49	80.93
565.49	174.09	489.00	476.19	32.06	6,381.93	6,602.52	220.59
245.02	80.18	210.30	205.75	13.79	2,727.74	2,926.30	198.56
1,761.00	573.89	1,588.80	1,506.99	104.16	18,974.05	18,799.60	(174.45)
847.66	286.38	822.60	746.50	53.93	9,272.22	9,660.67	388.45
4,479.13	1,434.45	4,154.10	3,874.29	272.33	48,231.49	51,722.37	3,490.88
339.08	95.82	228.60	261.95	14.99	3,343.90	3,502.17	158.27
546.10	146.67	353.40	416.49	23.17	5,290.46	5,756.56	466.10
662.65	216.27	615.60	573.55	40.36	7,828.73	7,593.37	(235.36)
1,190.56	368.69	970.50	981.02	63.62	12,530.92	12,617.56	86.64
518.02	170.83	481.80	448.57	31.59	6,191.24	6,345.32	154.08
211.09	68.68	168.90	172.77	11.07	2,316.32	2,391.32	75.00
261.72	75.51	200.10	210.82	13.12	2,869.50	3,006.21	136.71
689.42	176.65	406.50	511.33	26.65	7,075.72	7,179.73	104.01
1,755.89	752.97	2,741.70	1,925.06	179.74	24,483.30	22,847.50	(1,635.80)
3,094.58	1,090.41	3,216.60	2,803.19	210.87	34,976.58	34,310.84	(665.74)
142.11	27.78	47.70	92.23	3.13	1,262.51	1,275.60	13.09
2,798.56	974.44	3,223.50	2,649.85	211.32	33,158.45	30,085.04	(3,073.41)
2,931.63	781.17	1,957.80	2,257.99	128.35	27,089.99	29,517.80	2,427.81
175.93	39.81	78.60	121.31	5.15	1,497.09	1,465.32	(31.77)
1,259.90	312.32	696.90	917.67	45.69	10,989.34	11,950.58	961.24
545.74	176.68	529.20	480.47	34.69	6,357.68	6,526.79	169.11
2,023.78	601.68	1,620.00	1,656.73	106.20	21,033.86	21,650.03	616.17
7,585.22	2,584.44	8,428.80	7,069.68	552.57	89,845.11	88,502.12	(1,342.99)
491.44	139.21	342.30	383.66	22.44	4,691.69	5,174.39	482.70
1,943.20	539.35	1,445.10	1,550.48	94.74	20,978.90	21,195.92	217.02
197.79	46.90	101.40	141.14	6.65	1,677.96	1,927.58	249.62
2,683.91	725.27	1,843.50	2,085.86	120.85	26,829.35	27,039.47	210.12
10,895.14	3,745.49	11,966.10	10,103.28	784.52	130,437.98	127,639.59	(2,798.39)

GEORGIAN BAY

Statement showing the amount to be paid by each Municipality as the Cost—under received by the Commission from each Municipality on account of such cost; upon ascertainment (by annual adjustment) of the actual Cost

Municipality	Interim rates per horsepower collected by Commission during year		Share of capital cost of system	Average horsepower supplied in year after correction for power factor	Share of operating		
	To Dec. 31 1938	From Jan. 1 1939			Cost of power purchased	Operating, maintenance and administrative expenses	Interest
	$ c.	$ c.	$ c.		$ c.	$ c.	$ c.
Paisley	54.00	50.00	46,450.07	125.4	90.24	1,890.38	2,177.54
Penetanguishene	36.50	36.50	211,706.60	784.0	564.20	8,782.52	9,962.84
Port Elgin	39.00	39.00	117,776.71	374.9	269.79	4,990.67	5,571.94
Port McNicoll	37.00	37.00	25,215.47	87.8	63.18	1,006.98	1,189.88
Port Perry	46.50	46.50	92,416.36	272.5	196.10	4,019.83	4,356.27
Priceville	60.00	50.00	3,744.44	9.3	6.69	207.06	168.96
Ripley	70.00	65.00	33,633.81	72.3	52.03	1,589.78	1,575.09
Rosseau	88.00	80.00	27,397.63	40.7	....	931.95	1,266.56
Shelburne	42.00	42.00	72,738.78	239.1	172.07	3,623.16	3,432.90
Southampton	39.00	39.00	91,652.42	297.8	214.31	3,922.27	4,330.85
Stayner	40.00	38.00	66,947.88	248.3	178.69	3,237.53	3,142.72
Sunderland	54.00	54.00	29,158.84	77.9	56.06	1,303.32	1,373.62
Tara	42.50	42.00	30,064.60	99.3	71.46	1,615.06	1,414.09
Teeswater	52.50	50.00	50,872.57	140.6	101.18	2,105.71	2,392.00
Thornton	60.50	60.00	13,495.64	32.7	23.53	578.59	636.77
Tottenham	83.00	70.00	40,487.35	73.2	52.68	1,458.79	1,892.80
Uxbridge	48.50	48.50	101,621.52	282.9	203.59	4,451.09	4,682.99
Victoria Harbour	40.00	38.00	20,317.42	71.2	51.24	1,280.20	957.17
Walkerton	34.50	34.00	177,053.54	728.5	524.26	7,949.51	8,331.92
Waubaushene	40.00	38.00	28,023.63	109.0	78.44	1,399.22	1,312.78
Wiarton	58.00	54.00	118,974.50	294.9	212.22	4,570.16	5,579.91
Windermere	60.00	55.00	16,420.55	40.7	....	657.01	745.71
Wingham	52.50	50.00	155,992.53	414.7	298.43	5,657.95	7,345.85
Woodville	54.00	54.00	25,719.00	71.8	51.67	1,133.19	1,211.97
Totals—Municipalities			7,023,162.01	25,595.3	16,929.83	313,353.26	329,528.84
Totals—Rural power districts			1,663,423.97	5,773.7	9,263.30	69,050.78	77,770.62
Totals—Companies			332,576.19	1,180.7	849.65	13,930.95	15,650.40
Totals—Local distribution systems			249,727.88	511.8	368.32	14,190.92	11,701.55
			9,268,890.05				
Non-operating capital			68,531.86				
Grand totals			9,337,421.91	33,061.5	27,411.10	410,525.91	434,651.41

SYSTEM *G.B.—COST OF POWER*

the Power Commission Act—of power supplied to it by the Commission; the amount and the amount remaining to be credited or charged to each Municipality of Power supplied to it in the year ended October 31, 1939

costs and fixed charges				Cost in excess of revenue from power sold to private companies	Amount charged to each municipality in respect of power supplied to it in the year	Amounts received from (or billed against) each municipality by the Commission	Amounts remaining to be credited or charged to each municipality Credited (Charged)
Provision for renewals	Provision for contingencies and obsolescence	Provision for stabilization of rates	Provision for sinking fund				
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
666.33	170.66	376.20	488.11	24.66	5,884.12	6,356.91	472.79
2,590.16	805.46	2,352.00	2,222.07	154.19	27,433.44	28,615.89	1,182.45
1,570.32	432.35	1,124.70	1,237.23	73.73	15,270.73	14,621.11	(649.62)
320.09	102.76	263.40	264.65	17.27	3,228.21	3,248.90	20.69
1,273.48	328.34	817.50	968.83	53.59	12,013.94	12,672.78	658.84
55.38	16.33	27.90	39.34	1.83	523.49	483.25	(40.24)
521.07	113.32	216.90	353.50	14.22	4,435.91	4,764.05	328.14
453.66	85.88	122.10	283.41	8.00	3,151.56	3,311.99	160.43
953.10	281.53	717.30	763.58	47.02	9,990.66	10,042.41	51.75
1.209.31	342.25	893.40	962.74	58.57	11,933.70	11,612.61	(321.09)
818.40	266.39	744.90	702.74	48.83	9,140.20	9,510.47	370.27
418.84	103.57	233.70	305.81	15.32	3,810.24	4.206.15	395.91
392.95	119.05	297.90	315.61	19.53	4,245.65	4,178.18	(67.47)
722.63	201.41	421.80	534.40	27.65	6,506.78	7,089.15	582.37
201.43	50.63	98.10	141.85	6.43	1,737.33	1,965.79	228.46
656.54	131.41	219.60	425.81	14.40	4,852.03	5,297.51	445.48
1,392.69	353.97	848.70	1,042.98	55.64	13,031.65	13,721.84	690.19
257.64	79.77	213.60	213.60	14.00	3,067.22	2,730.41	(336.81)
2,013.45	701.26	2,185.50	1,857.68	143.28	23,706.86	24,827.92	1,121.06
331.77	115.84	327.00	294.01	21.44	3,880.50	4,171.83	291.33
1,760.74	412.73	884.70	1,249.90	58.00	14,728.36	16,126.35	1,397.99
234.12	57.94	122.10	167.82	8.00	1,992.70	2,252.71	260.01
2,257.12	560.44	1,244.10	1,642.41	81.56	19,087.86	20,896.52	1,808.66
362.23	90.83	215.40	269.32	14.12	3,348.73	3,877.65	528.92
86,334.05	26,722.86	76,785.90	73,477.63	5,033.92	928,166.29	943,896.67	27,103.52 (11,373.14)
21,334.42	6,361.80	17,321.10	17,261.78	1,135.48	219,499.28	219,499.28	....
4,142.55	1,275.46	....	3,473.72	(5,817.31)	33,505.42	33,505.42	....
3,868.79	1,515.24	....	2,597.24	(352.09)	33,889.97	33,889.97	....
115,679.81	35,875.36	94,107.00	96,810.37	....	1,215,060.96	1,230,791.34	27,103.52 (11,373.14)

GEORGIAN BAY

Statement showing the net Credit or Charge to each Municipality in respect of and adjustments made during the year. Also the net amount Credited ended October 31, 1939, and the accumulated amount standing

Municipality	Date commenced operating	Net credit or charge at October 31, 1938	
		Credit	Charge
		$ c.	$ c.
Alliston	June 1918	2,528.24	....
Arthur	Dec. 1916	1,327.40	....
Barrie	April 1913	7,639.29	....
Beaverton	Nov. 1914	932.99	....
Beeton	Aug. 1918	1,102.53	....
Bradford	Oct. 1918	1,561.41	....
Brechin	Jan. 1915	270.07	....
Cannington	Nov. 1914	208.21	....
Chatsworth	Dec. 1915	573.45	....
Chesley	July 1916	843.60	....
Coldwater	Mar. 1913	1,621.43	....
Collingwood	Mar. 1913	10,610.70	....
Cookstown	May 1918	615.55	....
Creemore	Nov. 1914	1,063.10	....
Dundalk	Dec. 1915	560.43	....
Durham	Dec. 1915	567.59	....
Elmvale	June 1913	593.15	....
Elmwood	April 1918	255.51	....
Flesherton	Dec. 1915	547.50	....
Grand Valley	Dec. 1916	526.31	....
Gravenhurst	Nov. 1915	1,267.73	....
Hanover	Sept. 1916	1,997.85	....
Holstein	May 1916	....	81.10
Huntsville	Sept. 1916	534.77	....
Kincardine	Mar. 1921	4,508.97	....
Kirkfield	June 1920	123.13	....
Lucknow	Jan. 1921	1,924.89	....
Markdale	Mar. 1916	1,251.85	....
Meaford	Jan. 1924	2,199.86	....
Midland	July 1911	4,650.32	....
Mildmay	Dec. 1932	712.31	....
Mount Forest	Dec. 1915	1,586.62	....
Neustadt	Dec. 1918	526.64	....
Orangeville	July 1916	2,187.59	....
Owen Sound	Dec. 1915	7,641.73	....

SYSTEM *G.B.—CREDIT OR CHARGE*

power supplied to it to October 31, 1938, the cash receipts and payments thereon or Charged to each Municipality in respect of power supplied in the year as a Credit or Charge to each Municipality at October 31, 1939

Cash receipts and payments on account of such credits and charges, also adjustments made during the year		Net amount credited or charged in respect of power supplied in the year ended October 31, 1939		Accumulated amount standing as a credit or charge on October 31, 1939	
Credited	Charged	Credited	Charged	Credit	Charge
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
	2,528.24	1,509.42		1,509.42	
	1,327.40	309.22		309.22	
	7,639.29	1,922.25		1,922.25	
	932.99	568.42		568.42	
	1,102.53	160.26		160.26	
	1,561.41	731.11		731.11	
	270.07	80.93		80.93	
	208.21	220.59		220.59	
	573.45	198.56		198.56	
	843.60		174.45		174.45
	1,621.43	388.45		388.45	
	10,610.70	3,490.88		3,490.88	
	615.55	158.27		158.27	
	1,063.10	466.10		466.10	
1.08	561.51		235.36		235.36
	567.59	86.64		86.64	
	593.15	154.08		154.08	
	255.51	75.00		75.00	
	547.50	136.71		136.71	
	526.31	104.01		104.01	
	1,267.73		1,635.80		1,635.80
	1,997.85		665.74		665.74
81.10		13.09		13.09	
	534.77		3,073.41		3,073.41
	4,508.97	2,427.81		2,427.81	
	123.13		31.77		31.77
	1,924.89	961.24		961.24	
	1,251.85	169.11		169.11	
	2,199.86	616.17		616.17	
	4,650.32		1,342.99		1,342.99
	712.31	482.70		482.70	
	1,586.62	217.02		217.02	
	526.64	249.62		249.62	
	2,187.59	210.12		210.12	
	7,641.73		2,798.39		2,798.39

GEORGIAN BAY

Statement showing the net Credit or Charge to each Municipality in respect of and adjustments made during the year. Also the net amount Credited ended October 31, 1939, and the accumulated amount standing

Municipality	Date commenced operating	Net credit or charge at October 31, 1938	
		Credit	Charge
		$ c.	$ c.
Paisley	Sept. 1923	1,186.03	....
Penetanguishene	July 1911	2,840.35	....
Port Elgin	Mar. 1931	131.31	....
Port McNicoll	Jan. 1915	159.08	....
Port Perry	Sept. 1922	638.79	....
Priceville	Mar. 1920	259.88	....
Ripley	Jan. 1921	822.19	....
Rosseau	July 1931	562.84	....
Shelburne	July 1916	441.40	....
Southampton	Feb. 1931	413.96	....
Stayner	Oct. 1913	1,324.57	....
Sunderland	Nov. 1914	247.27	....
Tara	Feb. 1918	451.76	....
Teeswater	Dec. 1920	889.53	....
Thornton	Nov. 1918	144.84	....
Tottenham	Oct. 1918	1,208.69	....
Uxbridge	Sept. 1922	968.67	....
Victoria Harbour	July 1914	251.07	....
Walkerton	Feb. 1931	2,648.50	....
Waubaushene	Dec. 1914	711.55	....
Wiarton	May 1931	2,864.25	....
Windermere	June 1930	439.67	....
Wingham	Dec. 1920	2,927.77	....
Woodville	Nov. 1914	91.44	....
Totals—Municipalities	....	87,688.13	81.10
Totals—Rural power districts	....	66,759.44	149,966.90
Grand totals	....	154,447.57	150,048.00

SYSTEM *G.B.—CREDIT OR CHARGE*

**power supplied to it to October 31, 1938, the cash receipts and payments thereon
or Charged to each Municipality in respect of power supplied in the year
as a Credit or Charge to each Municipality at October 31, 1939**

Cash receipts and payments on account of such credits and charges, also adjustments made during the year		Net amount credited or charged in respect of power supplied in the year ended October 31, 1939		Accumulated amount standing as a credit or charge on October 31, 1939	
Credited	Charged	Credited	Charged	Credit	Charge
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
	1,186.03	472.79		472.79	
	2,840.35	1,182.45		1,182.45	
	131.31		649.62		649.62
	159.08	20.69		20.69	
	638.79	658.84		658.84	
	259.88		40.24		40.24
	822.19	328.14		328.14	
	562.84	160.43		160.43	
	441.40	51.75		51.75	
	413.96		321.09		321.09
	1,324.57	370.27		370.27	
	247.27	395.91		395.91	
	451.76		67.47		67.47
	889.53	582.37		582.37	
	144.84	228.46		228.46	
	1,208.69	445.48		445.48	
	968.67	690.19		690.19	
	251.07		336.81		336.81
	2,648.50	1,121.06		1,121.06	
	711.55	291.33		291.33	
	2,864.25	1,397.99		1,397.99	
	439.67	260.01		260.01	
	2,927.77	1,808.66		1,808.66	
	91.44	528.92		528.92	
82.18	87,689.21	27,103.52	11,373.14	27,103.52	11,373.14
2,911.19	5,990.76	9,811.99	67,172.19	75,052.43	218,699.66
2,993.37	93,679.97	36,915.51	78,545.33	102,155.95	230,072.80

GEORGIAN BAY SYSTEM *G.B.—SINKING FUND*

Statement showing Sinking Fund paid by each Municipality in the periods mentioned hereunder, as part of the cost of power delivered thereto, together with the proportionate share of other sinking funds provided out of other revenues of the system, and interest allowed thereon to October 31, 1939

Municipality	Period of years ending Oct. 31, 1939	Amount	Municipality	Period of years ending Oct. 31, 1939	Amount
		$ c.			$ c.
Alliston	16 years	21,524.64	Mildmay	7 years	2,562.23
Arthur	18 "	18,388.91	Mount Forest	19 "	30,104.10
Barrie	21 "	139,016.26	Neustadt	16 "	6,184.85
Beaverton	20 "	19,538.37	Orangeville	18 "	41,006.49
Beeton	16 "	14,739.04	Owen Sound	19 "	192,476.02
Bradford	16 "	17,087.18	Paisley	15 "	10,230.99
Brechin	20 "	7,358.03	Penetanguishene	23 "	59,394.22
Cannington	20 "	14,748.50	Port Elgin	9 "	9,383.85
Chatsworth	19 "	4,130.36	Port McNicoll	20 "	5,909.15
Chesley	18 "	33,894.05	Port Perry	15 "	16,014.89
Coldwater	21 "	14,314.12	Priceville	15 "	896.73
Collingwood	21 "	128,589.15	Ripley	15 "	7,147.33
Cookstown	16 "	4,999.26	Rosseau	9 "	3,033.30
Creemore	20 "	11,216.30	Shelburne	18 "	17,888.79
Dundalk	19 "	11,672.06	Southampton	9 "	8,231.17
Durham	19 "	29,403.83	Stayner	21 "	15,424.17
Elmvale	21 "	14,371.66	Sunderland	20 "	9,723.53
Elmwood	16 "	3,838.93	Tara	16 "	7,936.73
Flesherton	19 "	6,274.28	Teeswater	15 "	11,442.03
Grand Valley	18 "	11,408.41	Thornton	16 "	3,148.78
Gravenhurst	19 "	25,902.27	Tottenham	16 "	9,976.30
Hanover	18 "	76,985.29	Uxbridge	15 "	16,923.98
Holstein	18 "	2,543.47	Victoria Harbour	20 "	6,144.18
Huntsville	18 "	54,729.86	Walkerton	9 "	15,364.99
Kincardine	15 "	38,944.47	Waubaushene	20 "	3,983.36
Kirkfield	15 "	3,014.96	Wiarton	9 "	12,034.56
Lucknow	15 "	18,117.63	Windermere	10 "	2,131.23
Markdale	18 "	9,518.46	Wingham	15 "	33,661.61
Meaford	15 "	27,196.13	Woodville	20 "	9,506.14
Midland	21 "	205,145.99			
			Totals—Municipalities		$1,556,477.57
			Totals—Rural power districts		257,795.88
			Grand total		$1,814,273.45

GEORGIAN BAY SYSTEM *G.B.—RURAL OPERATING*

Rural Power Districts

Operating Account for Year Ended October 31, 1939

Revenue from customers in rural power districts		$449,428.70
Cost of power as provided to be paid under Power Commission Act	$219,499.28	
Cost of operation, maintenance and administration	131,276.84	
Interest	95,848.87	
Provision for renewals	38,889.57	
Provision for sinking fund	21,274.34	
		506,788.90
Balance		$ 57,360.20

GEORGIAN BAY SYSTEM—RURAL LINES

Statement showing Interest, Renewals, Contingencies and Obsolescence and Sinking Fund charged by the Commission to the Municipalities which operate the respective rural lines for the year ended October 31, 1939

Operated by	Capital cost	Interest	Provision for renewals	Provision for contingencies and obsolescence	Provision for sinking fund	Total interest, renewals, obsolescence, contingencies and sinking fund charged
	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
Brechin	922.02	48.22	18.44	9.22	16.60	92.48
Flesherton	1,915.15	107.44	38.30	19.15	34.47	199.36
Totals	2,837.17	155.66	56.74	28.37	51.07	291.84

GEORGIAN BAY SYSTEM—RURAL LINES

Statement showing the total Sinking Fund paid in respect of each line, together with interest allowed thereon to October 31, 1939

	Period of years ended October 31, 1939	Amount
		$ c.
Brechin	21 years	494.50
Flesherton	22 years	913.61
Total		1,408.11

EASTERN ONTARIO

Statement showing the amount to be paid by each Municipality as the Cost—under received by the Commission from each Municipality on account of such cost; upon ascertainment (by annual adjustment) of the actual Cost

Municipality	Interim rates per horsepower collected by Commission during year		Share of capital cost of system	Average horse-power supplied in year after correction for power factor	Share of operating		
	To Dec. 31 1938	From Jan. 1 1939			Cost of power purchased	Operating, maintenance and administrative expenses	Interest
	$ c.	$ c.	$ c.		$ c.	$ c.	$ c.
Alexandria	55.00	52.00	77,477.15	195.8	1,386.65	2,128.94	3,605.76
Apple Hill	44.00	44.00	11,159.27	38.2	270.53	442.76	519.95
Arnprior	32.00	30.00	122,030.59	818.5	5,796.58	8,124.20	5,699.75
Athens	45.00	45.00	34,580.16	105.3	745.73	810.35	1,618.39
Bath	66.00	56.00	13,471.24	34.8	246.45	341.59	624.49
Belleville	28.00	26.00	876,988.57	5,514.7	39,054.86	32,695.37	40,966.93
Bloomfield	47.00	47.00	32,063.11	104.6	740.77	1,144.98	1,490.38
Bowmanville	31.00	31.00	451,676.63	2,282.9	16,167.40	17,367.50	21,074.68
Brighton	32.00	32.00	62,471.00	303.4	2,148.67	2,451.55	2,910.40
Brockville	26.00	26.00	532,684.12	3,585.3	25,390.94	20,685.44	24,682.31
Cardinal	29.00	28.00	35,464.91	229.4	1,624.60	2,021.13	1,650.79
Carleton Place	29.00	28.00	240,559.71	1,493.2	10,574.78	8,879.79	11,187.53
Chesterville	34.00	33.00	50,943.90	252.0	1,784.65	2,163.07	2,331.09
Cobden	65.00	60.00	25,011.45	65.7	465.28	835.74	1,161.66
Cobourg	31.00	31.00	353,863.55	1,860.6	13,176.69	16,460.07	16,483.45
Colborne	33.00	33.00	37,143.32	179.1	1,268.38	1,547.13	1,731.65
Deseronto	45.00	46.00	46,965.71	154.2	1,092.04	1,515.47	2,199.94
Finch	47.00	42.00	22,305.76	78.4	555.23	860.09	997.89
Hastings	42.00	42.00	27,711.48	98.6	698.28	1,025.51	1,272.78
Havelock	46.50	46.50	48,402.82	141.2	999.97	1,240.99	2,230.60
Kemptville	35.00	35.00	76,416.18	369.6	2,617.49	2,635.88	3,559.86
Kingston	27.00	27.00	1,525,753.95	8,481.9	60,068.44	53,551.61	71,497.57
Lakefield	39.00	37.00	72,337.94	280.4	1,985.78	2,341.73	3,363.93
Lanark	40.00	40.00	20,778.91	78.6	556.64	670.70	970.21
Lancaster	62.00	60.00	17,449.57	40.8	288.94	523.39	775.32
Lindsay	34.00	34.00	503,110.18	2,445.1	17,316.09	22,323.09	23,234.11
Madoc	40.50	44.00	52,451.99	176.8	1,252.09	2,697.54	2,456.62
Marmora	40.50	38.00	30,588.44	120.1	850.54	1,137.09	1,387.46
Martintown	43.50	42.00	7,893.85	33.8	239.37	421.58	339.16
Maxville	51.00	48.00	33,199.44	87.9	622.50	839.84	1,551.87
Millbrook	53.00	40.00	18,152.02	67.7	479.45	976.74	798.97
Morrisburg	32.50	32.50	37,055.47	207.1	1,466.67	1,876.95	1,733.49
Napanee	30.00	30.00	221,613.15	1,178.3	8,344.67	8,452.83	10,330.94
Newcastle	32.50	32.50	28,433.96	134.2	950.40	1,198.52	1,331.54
Norwood	35.50	35.50	26,421.84	119.4	845.59	1,010.46	1,206.53

SYSTEM *E.O.—COST OF POWER*

the Power Commission Act—of Power supplied to it by the Commission; the amount and the amount remaining to be credited or charged to each Municipality of Power supplied to it in the year ended October 31, 1939

costs and fixed charges				Revenue received in excess of cost of power sold to private companies (Credit)	Amount charged to each municipality in respect of power supplied to it in the year	Amounts received from (or billed against) each municipality by the Commission	Amounts remaining to be credited or charged to each municipality Credited (Charged)
Provision for renewals	Provision for contingencies and obsolescence	Provision for stabilization of rates	Provision for sinking fund				
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
1,326.70	248.36	391.60	814.73	10.61	9,892.13	10,292.99	400.86
179.71	42.38	76.40	117.29	2.07	1,646.95	1,679.69	32.74
1,527.78	499.96	1,637.00	1,282.87	44.35	24,523.79	24,552.95	29.16
574.45	115.79	210.60	364.95	5.71	4,434.55	4,739.25	304.70
207.11	41.71	69.60	141.77	1.89	1,670.83	2,005.36	334.53
7,663.27	2,934.17	11,029.40	9,220.60	298.83	143,265.77	145,226.68	1,960.91
452.28	103.67	209.20	336.49	5.67	4,472.10	4,916.18	444.08
4,945.27	1,549.10	4,565.80	4,750.47	123.71	70,296.51	70,768.34	471.83
704.45	227.19	606.80	656.20	16.44	9,688.82	9,708.78	19.96
6,539.83	2,122.69	7,170.60	5,571.40	194.28	91,968.93	93,217.78	1,248.85
449.83	151.59	458.80	373.00	12.43	6,717.31	6,462.76	(254.55)
3,151.72	910.85	2,986.40	2,532.31	80.91	40,142.47	42,062.11	1,919.64
716.73	193.61	504.00	526.94	13.66	8,206.43	8,359.67	153.24
427.00	84.80	131.40	263.22	3.56	3,365.54	4,003.29	637.75
3,741.19	1,235.75	3,721.20	3,719.40	100.82	58,436.93	57,679.88	(757.05)
421.03	134.97	358.20	390.09	9.71	5,841.74	5,908.92	67.18
663.72	178.58	308.40	494.45	8.36	6,444.24	7,067.98	623.74
342.41	76.91	156.80	226.82	4.25	3,211.90	3,359.86	147.96
368.34	95.40	197.20	286.65	5.34	3,938.82	4,142.60	203.78
701.84	158.42	282.40	502.30	7.65	6,108.87	6,566.57	457.70
1,117.57	277.94	739.20	804.47	20.03	11,732.38	12,935.71	1,203.33
15,398.88	4,947.39	16,963.80	16,083.70	459.62	238,051.77	229,011.32	(9,040.45)
944.60	237.87	560.80	761.02	15.19	10,180.54	10,471.47	290.93
328.29	75.72	157.20	218.79	4.26	2,973.29	3,145.32	172.03
287.20	54.37	81.60	175.43	2.21	2,184.04	2,464.87	280.83
5,607.24	1,667.17	4,890.20	5,251.53	132.49	80,156.94	83,132.23	2,975.29
730.21	185.90	353.60	550.71	9.58	8,217.09	7,666.75	(550.34)
383.33	113.66	240.20	314.76	6.51	4,420.53	4,618.24	197.71
108.00	27.82	67.60	76.92	1.83	1,278.62	1,427.65	149.03
568.36	114.09	175.80	351.41	4.76	4,219 11	4,270.22	51.11
220.64	61.84	135.40	179.83	3.67	2,849.20	2,708.66	(140.54)
506.48	161.46	414.20	389.59	11.22	6,537.62	6,732.32	194.70
2,322.26	779.76	2,356.60	2,330.71	63.85	34,853.92	35,350.07	496.15
328.36	101.20	268.40	299.08	7.27	4,470.23	4,360.40	(109 83)
303.32	97.69	238.80	271.98	6.47	3,967.90	4,237.49	269.59

EASTERN ONTARIO

Statement showing the amount to be paid by each Municipality as the Cost—under received by the Commission from each Municipality on account of such cost; upon ascertainment (by annual adjustment) of the actual Cost

Municipality	Interim rates per horsepower collected by Commission during year		Share of capital cost of system	Average horse-power supplied in year after correction for power factor	Share of operating		
	To Dec. 31 1938	From Jan. 1 1939			Cost of power purchased	Operating, maintenance and administrative expenses	Interest
	$ c.	$ c.	$ c.		$ c.	$ c.	$ c.
Orono	48.00	37.00	21,469.20	84.2	596.30	1,008.79	1,003.49
Oshawa	30.50	30.50	2,789,878.01	14,121.3	100,006.43	102,521.78	130,076.25
Ottawa	....	....	964.71	19,543.9	214,983.06	133.46	45.14
Ottawa	20.50	20.50	983,779.27	9,928.7	70,314.62	48,155.96	45,791.16
Perth	28.00	28.00	230,717.51	1,484.1	10,510.33	9,069.99	10,740.04
Peterborough	26.00	26.00	1,548,626.94	9,386.4	66,474.07	54,859.55	72,228.78
Picton	39.50	39.50	270,922.73	1,041.9	7,378.69	8,899.42	12,576.53
Port Hope	32.50	32.50	355,503.31	1,916.7	13,573.99	16,434.91	16,552.52
Prescott	26.50	26.50	148,856.93	995.0	7,046.55	6,315.68	6,936.10
Richmond	52.00	50.00	18,502.31	59.2	419.25	725.78	847.68
Russell	50.00	46.00	19,228.34	60.6	429.17	704.14	840.95
Smiths Falls	25.00	25.00	312,968.99	2,294.1	16,246.72	12,948.77	14,525.11
Stirling	27.00	27.00	44,706.14	273.8	1,939.04	1,821.06	2,084.82
Trenton	24.00	24.00	524,843.06	3,492.8	24,735.86	18,391.67	24,482.97
Tweed	52.00	50.00	67,049.96	214.6	1,519.79	2,816.09	3,128.24
Warkworth	40.00	40.00	20,052.34	78.8	558.06	544.51	935.48
Wellington	38.00	38.00	46,833.49	192.2	1,361.15	1,604.59	2,174.19
Westport	62.00	55.00	37,610.25	85.7	606.92	847.10	1,744.97
Whitby	30.50	30.50	236,529.73	1,200.6	8,502.60	8,733.59	11,029.87
Williamsburg	28.00	28.00	23,894.41	147.5	1,044.59	1,303.61	1,114.81
Winchester	31.00	31.00	52,753.19	299.6	2,121.75	2,429.74	2,458.74
Totals—Municipalities			13,530,322.16	98,259.3	772,442.08	523,669.81	630,295.84
Totals—Rural power districts			1,835,117.96	9,982.6	79,047.32	68,469.12	85,511.60
Totals—Companies			3,237,385.35	18,551.3	159,122.04	119,781.52	150,972.62
Totals—Local electric distribution systems			109,391.18	473.8	3,355.43	9,180.09	5,556.52
Totals—Local gas distribution system			....	....	....	3,057.04	202.05
Totals—Pulp mill			278,522.92	1,426.8	10,104.53	21,273.25	12,973.27
			18,990,739.57				
Non-operating capital			99,079.02				
Grand totals			19,089,818.59	128,693.8	1,024,071.40	745,430.83	885,511.90

SYSTEM *E.O.—COST OF POWER*

the Power Commission Act—of Power supplied to it by the Commission; the amount
and the amount remaining to be credited or charged to each Municipality
of Power supplied to it in the year ended October 31, 1939

costs and fixed charges				Revenue received in excess of cost of power sold to private companies (Credit)	Amount charged to each municipality in respect of power supplied to it in the year	Amounts received from (or billed against) each municipality by the Commission	Amounts remaining to be credited or charged to each municipality Credited (Charged)
Provision for renewals	Provision for contingencies and obsolescence	Provision for stabilization of rates	Provision for sinking fund				
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
278.60	72.57	168.40	225.86	4.56	3,349.45	3,115.09	(234.36)
30,498.03	9,348.21	28,242.60	29,336.55	765.21	429,264.64	430,699.88	1,435.24
19.30	4.82	....	10.16	....	215,195.94	215,195.94	....
8,416.46	4,238.11	19,857.40	10,333.68	538.01	206,569.38	203,537.49	(3,031.89)
2,965.94	909.94	2,968.20	2,429.17	80.42	39,513.19	41,553.62	2,040.43
14,162.57	5,096.75	18,772.80	16,283.35	508.63	247,369.24	244,047.48	(3,321.76)
3,533.00	864.29	2,083.80	2,839.90	56.46	38,119.17	41,155.17	3,036.00
3,677.51	1,224.14	3,833.40	3,738.62	103.86	58,931.23	62,291.91	3,360.68
1,853.07	611.55	1,990.00	1,566.25	53.92	26,265.28	26,366.16	100.88
298.75	60.66	118.40	192.49	3.21	2,659.80	2,979.54	319.74
294.69	63.85	121.20	191.12	3.28	2,641.84	2,829.46	187.62
3,682.90	1,272.91	4,588.20	3,280.18	124.31	56,420.48	57,352.92	932.44
403.76	148.79	547.60	470.06	14.84	7,400.29	7,393.27	(7.02)
4,241.61	1,749.49	6,985.60	5,517.75	189.27	85,915.68	83,828.04	(2,087.64)
962.69	213.72	429.20	708.66	11.63	9,766.76	10,810.14	1,043.38
259.93	68.76	157.60	210.95	4.27	2,731.02	3,153.31	422.29
589.41	157.21	384.40	491.07	10.41	6,751.61	7,302.96	551.35
656.96	123.89	171.40	395.99	4.64	4,542.59	4,814.86	272.27
2,582.42	761.05	2,401.20	2,488.66	65.06	36,434.33	36,619.17	184.84
310.80	101.75	295.00	251.19	7.99	4,413.76	4,129.52	(284.24)
715.67	212.68	599.20	554.64	16.23	9,076.19	9,286.05	209.86
144,663.47	47,314.92	157,430.80	142,148.18	(4,265.42)	2,413,699.68	2,423,716.34	29,836.33 (19,819.67)
21,894.36	6,697.66	19,965.20	19,246.47	(540.93)	300,290.80	300,290.80	....
36,251.75	12,173.53	....	40,762.48	15,533.66	534,597.60	534,597.60	....
1,551.34	308.69	....	1,149.80	7,293.11	28,394.98	28,394.98	....
....	....	....	....	(1,016.10)	2,242.99	2,242.99	....
1,964.00	773.35	....	2,375.78	(17,004.32)	32,459.86	32,459.86	....
206,324.92	67,268.15	177,396.00	205,682.71	....	3,311,685.91	3,321,702.57	29,836.33 (19,819.67)

EASTERN ONTARIO

Statement showing the net Credit or Charge to each Municipality in respect of and adjustments made during the year; also the net amount Credited ended October 31, 1939, and the accumulated amount standing

Municipality	Date commenced operating	Net credit or charge at October 31, 1938	
		Credit	Charge
		$ c.	$ c.
Alexandria	Jan. 1921	840.46	
Apple Hill	April 1921	68.13	
Arnprior	Jan. 1939		
Athens	Jan. 1929	183.47	
Bath	Nov. 1931	323.66	
Belleville	April 1929	16,755.32	
Bloomfield	April 1919	270.10	
Bowmanville	Oct. 1931	1,905.85	
Brighton	Nov. 1929	306.11	
Brockville	April 1915	5,120.05	
Cardinal	July 1930	463.88	
Carleton Place	May 1919	3,966.52	
Chesterville	April 1914	606.58	
Cobden	Nov. 1935	460.27	
Cobourg	Jan. 1932	2,557.57	
Colborne	Jan. 1933	98.49	
Deseronto	Jan. 1931		183.16
Finch	Feb. 1928	556.90	
Hastings	June 1931	38.70	
Havelock	Feb. 1921	67.45	
Kemptville	Dec. 1921	861.81	
Kingston	Nov. 1937		2,229.72
Lakefield	Aug. 1920	1,051.90	
Lanark	Sept. 1921	113.56	
Lancaster	May 1921	225.17	
Lindsay	Mar. 1928	5,979.84	
Madoc	Jan. 1930		602.71
Marmora	Jan. 1921	644.17	
Martintown	May 1921	152.15	
Maxville	Feb. 1921	555.43	
Millbrook	Dec. 1938		
Morrisburg	June 1938		148.82
Napanee	Nov. 1929	1,433.27	
Newcastle	Jan. 1937		154.87
Norwood	Feb. 1921	113.50	

SYSTEM *E.O.—CREDIT OR CHARGE*

power supplied to it to October 31, 1938, the cash receipts and payments thereon or Charged to each Municipality in respect of power supplied in the year as a Credit or Charge to each Municipality at October 31, 1939

Cash receipts and payments on account of such credits and charges, also adjustments made during the year		Net amount credited or charged in respect of power supplied in the year ending October 31, 1939		Accumulated amount standing as a credit or charge on October 31, 1939	
Credited	Charged	Credited	Charged	Credit	Charge
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
	840.46	400.86		400.86	
	68.13	32.74		32.74	
		29.16		29.16	
	183.47	304.70		304.70	
	323.66	334.53		334.53	
	16,755.32	1,960.91		1,960.91	
	270.10	444.08		444.08	
	1,905.85	471.83		471.83	
	306.11	19.96		19.96	
	5,120.05	1,248.85		1,248.85	
	463.88		254.55		254.55
	3,966.52	1,919.64		1,919.64	
	606.58	153.24		153.24	
	460.27	637.75		637.75	
	2,557.57		757.05		757.05
	98.49	67.18		67.18	
183.16		623.74		623.74	
	556.90	147.96		147.96	
	38.70	203.78		203.78	
	67.45	457.70		457.70	
	861.81	1,203.33		1,203.33	
2,229.72			9,040.45		9,040.45
	1,051.90	290.93		290.93	
	113.56	172.03		172.03	
	225.17	280.83		280.83	
	5,979.84	2,975.29		2,975.29	
602.71			550.34		550.34
	644.17	197.71		197.71	
	152.15	149.03		149.03	
	555.43	51.11		51.11	
			140.54		140.54
148.82		194.70		194.70	
	1,433.27	496.15		496.15	
154.87			109.83		109.83
	113.50	269.59		269.59	

EASTERN ONTARIO

Statement showing the net Credit or Charge to each Municipality in respect of and adjustments made during the year; also the net amount Credited ended October 31, 1939, and the accumulated amount standing

Municipality	Date commenced operating	Net credit or charge at October 31, 1938	
		Credit	Charge
		$ c.	$ c.
Orono	Nov. 1938	....	....
Oshawa	Feb. 1929	16,034.17	....
Ottawa	Jan. 1914	7,674.22	....
Perth	Feb. 1919	3,083.46	....
Peterborough	Mar. 1913	7,459.42	....
Picton	April 1919	2,884.24	....
Port Hope	Nov. 1929	3,706.91	....
Prescott	Dec. 1913	1,372.96	....
Richmond	Aug. 1928	417.69	....
Russell	Feb. 1926	406.42	....
Smiths Falls	Sept. 1918	2,939.03	....
Stirling	Jan. 1930	219.89	....
Trenton	Sept. 1931	1,950.38	....
Tweed	Dec. 1930	1,177.80	....
Warkworth	Oct. 1923	111.63	....
Wellington	April 1919	463.17	....
Westport	Nov. 1931	806.58	....
Whitby	Jan. 1926	1,674.89	....
Williamsburg	April 1915	70.51	....
Winchester	Jan. 1914	354.13	....
Totals—Municipalities		98,527.81	3,319.28
Totals—Rural power districts		201,832.67	105,439.15
Grand totals		300,360.48	108,758.43

power supplied to it to October 31, 1938, the cash receipts and payments thereon or Charged to each Municipality in respect of power supplied in the year as a Credit or Charge to each Municipality at October 31, 1939

Cash receipts and payments on account of such credits and charges, also adjustments made during the year		Net amount credited or charged in respect of power supplied in the year ending October 31, 1939		Accumulated amount standing as a credit or charge on October 31, 1939	
Credited	Charged	Credited	Charged	Credit	Charge
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
			234.36		234.36
	16,034.17	1,435.24		1,435.24	
	7,674.22		3,031.89		3,031.89
	3,083.46	2,040.43		2,040.43	
	7,459.42		3,321.76		3,321.76
	2,884.24	3,036.00		3,036.00	
	3,706.91	3,360.68		3,360.68	
	1,372.96	100.88		100.88	
	417.69	319.74		319.74	
	406.42	187.62		187.62	
	2,939.03	932.44		932.44	
	219.89		7.02		7.02
	1,950.38		2,087.64		2,087.64
	1,177.80	1,043.38		1,043.38	
	111.63	422.29		422.29	
	463.17	551.35		551.35	
	806.58	272.27		272.27	
	1,674.89	184.84		184.84	
	70.51		284.24		284.24
	354.13	209.86		209.86	
3,319.28	98,527.81	29,836.33	19,819.67	29,836.33	19,819.67
8,147.22	4,290.62	31,093.06	37,758.37	234,025.70	140,440.89
11,466.50	102,818.43	60,929.39	57,578.04	263.862.03	160,260.56

EASTERN ONTARIO SYSTEM *E.O.—SINKING FUND*

Statement showing Sinking Fund paid by each Municipality in the periods mentioned hereunder as part of the cost of power delivered thereto, together with its proportionate share of other sinking funds provided out of other revenues of the system, and interest allowed thereon to October 31, 1939

Municipality	Period of years ending Oct. 31, 1939	Amount	Municipality	Period of years ending Oct. 31, 1939	Amount
		$ c.			$ c.
Alexandria	15 years	28,672.32	Millbrook	1 “	213.63
Apple Hill	15 “	3,064.15	Morrisburg	2 “	643.61
Arnprior	1 “	1,691.56	Napanee	10 “	37,282.05
Athens	11 “	5,593.78	Newcastle	3 “	1,115.51
Bath	8 “	1,842.44	Norwood	11 “	5,422.70
Belleville	11 “	153,210.16	Orono	1 “	267.90
Bloomfield	11 “	5,574.01	Oshawa	11 “	468,390.55
Bowmanville	8 “	51,505.31	Ottawa	24 “	170,721.21
Brighton	10 “	10,049.11	Perth	15 “	64,019.10
Brockville	19 “	158,514.71	Peterborough	11 “	275,836.29
Cardinal	10 “	4,741.76	Picton	11 “	47,602.73
Carleton Place	15 “	72,809.01	Port Hope	10 “	49,306.11
Chesterville	20 “	25,609.93	Prescott	20 “	44,832.92
Cobden	4 “	926.93	Richmond	12 “	2,544.87
Cobourg	8 “	38,418.95	Russell	14 “	5,125.83
Colborne	7 “	3,249.59	Smiths Falls	16 “	93,297.91
Deseronto	9 “	6,195.20	Stirling	10 “	7,843.64
Finch	12 “	3,899.58	Trenton	8 “	66,823.12
Hastings	9 “	3,210.32	Tweed	9 “	8,287.57
Havelock	11 “	11,113.89	Warkworth	11 “	3,501.65
Kemptville	15 “	18,996.04	Wellington	11 “	9,129.93
Kingston	2 “	41,282.87	Westport	8 “	4,102.64
Lakefield	11 “	11,662.35	Whitby	11 “	45,721.04
Lanark	15 “	5,725.54	Williamsburg	19 “	5,849.63
Lancaster	15 “	5,745.83	Winchester	20 “	18,297.90
Lindsay	11 “	84,009.74	Totals—Municipalities		$2,216,217.14
Madoc	10 “	6,877.54	Totals—Rural power districts		455,994.86
Marmora	11 “	5,014.09			
Martintown	15 “	1,927.43			
Maxville	15 “	8,902.96	Grand totals		$2,672,212.00

Rural Power Districts

Operating Account for Year Ended October 31, 1939

Revenue from customers in rural power districts		$766,209.79
Cost of power as provided to be paid under Power Commission Act	$300,290.80	
Cost of operation, maintenance and administration	218,760.35	
Interest	154,120.34	
Provision for renewals	65,015.06	
Provision for sinking fund	34,688.55	
		772,875.10
Balance		$ 6,665.31

THUNDER BAY

Statement showing the amount to be paid by each Municipality as the Cost—under received by the Commission from each Municipality on account of such cost; upon ascertainment (by annual adjustment) of the actual Cost

Municipality	Interim rates per horsepower collected by Commission during year		Share of capital cost of system	Average horsepower supplied in year after correction for power factor	Operating, maintenance and administrative expenses	Interest
	To Dec. 31, 1938	From Jan. 1, 1939				
	$ c.	$ c.	$ c.		$ c.	$ c.
Fort William..........	21.00	21.00	3,035,922.88	12,113.0	45,901.19	141,266.46
Port Arthur..........	21.00	21.00	8,941,798.50	35,888.3	132,682.40	415,915.25
Township of Nipigon..	30.00	28.00	36,346.03	155.0	1,509.65	1,675.61
Totals—Municipalities..................			12,014,067.41	48,156.3	180,093.24	558,857.32
Totals—Rural power districts............			117,556.10	341.5	2,565.17	4,355.55
Totals—Companies.....................			7,557,831.27	28,511.4	170,874.39	351,179.60
Totals—Local distribution systems........			70,152.77	....	7,145.90	2,720.11
			19,759,607.55			
Non-operating capital..................			7,028.70			
Grand totals..........................			19,766,636.25	77,009.2	360,678.70	917,112.58

THUNDER BAY

Statement showing the net Credit or Charge to each Municipality in respect of and adjustments made during the year; also the net amount Credited ended October 31, 1939, and the accumulated amount standing

Municipality	Date commenced operating	Net credit or charge at October 31, 1938	
		Credit	Charge
		$ c.	$ c.
Fort William..........................	Oct. 1926	....	6,080.39
Port Arthur..........................	Dec. 1910	....	9,849.08
Township of Nipigon..................	Jan. 1925	832.15	....
Total—Municipalities................................		832.15	15,929.47
Total—Rural power districts........................		3,317.67	8,843.61
Grand total....................................		4,149.82	24,773.08

SYSTEM *T.B.—COST OF POWER*

the Power Commission Act—of Power supplied to it by the Commission; the amount and the amount remaining to be credited or charged to each Municipality of Power supplied to it in the year ended October 31, 1939

Provision for renewals	Provision for contingencies and obsolescence	Provision for stabilization of rates	Provision for sinking fund	Revenue received in excess of cost of power sold to private companies (Credit)	Amounts charged to each municipality in respect of power supplied to it in the year	Amounts received from (or billed against) each municipality by the Commission	Amounts remaining to be credited or charged to each municipality Credited (Charged)
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
26,705.03	14,154.26	6,056.50	31,906.75	10,910.31	255,079.88	254,872.89	(206.99)
78,330.22	41,672.37	17,944.15	93,977.60	32,324.98	748,197.01	753,653.43	5,456.42
308.91	170.18	77.50	382.06	139.61	3,984.30	4,400.11	415.81
105,344.16	55,996.81	24,078.15	126,266.41	(43,374.90)	1,007,261.19	1,012,926.43	5,872.23 (206.99)
873.64	439.31	170.75	984.51	(307.59)	9,081.34	9,081.34	....
53,140.81	30,077.05	21,909.64	157,736.77	12,462.52	797,380.78	797,380.78	....
....	....	....	4,863.30	31,219.97	45,949.28	45,949.28	....
159,358.61	86,513.17	46,158.54	289,850.99	....	1,859,672.59	1,865,337.83	5,872.23 (206.99)

SYSTEM *T.B.—CREDIT OR CHARGE*

power supplied to it to October 31, 1938, the cash receipts and payments thereon or Charged to each Municipality in respect of power supplied in the year as a Credit or Charge to each Municipality at October 31, 1939

Cash receipts and payments on account of such credits and charges, also adjustments made during the year		Net amount credited or charged in respect of power supplied in the year ended October 31, 1939		Accumulated amount standing as a credit or charge on October 31, 1939	
Credited	Charged	Credited	Charged	Credit	Charge
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
6,080.39	....	....	206.99	....	206.99
9,849.08	....	5,456.42	....	5,456.42	....
....	832.15	415.81	....	415.81	....
15,929.47	832.15	5,872.23	206.99	5,872.23	206.99
132.71	353.74	780.01	1,896.41	4,230.39	11,093.76
16,062.18	1,185.89	6,652.24	2,103.40	10,102.62	11,300.75

THUNDER BAY DISTRICT *T.B.—SINKING FUND*

Statement showing Sinking Fund paid by each Municipality in the periods mentioned hereunder, as part of the cost of power delivered thereto, together with the proportionate share of other sinking funds provided out of other revenues of the system, and interest allowed thereon to October 31, 1939

Municipality	Period of years ending October 31, 1939	Amount
		$ c.
Fort William	13 years	632,854.47
Port Arthur	13 "	2,073,132.63
Township of Nipigon	13 "	5,357.48
Totals—Municipalities		2,711,344.58
Total—Rural power districts		13,169.27
Grand totals		2,724,513.85

MANITOULIN, NIPISSING AND SUDBURY RURAL POWER DISTRICTS

Operating Account for Year Ended October 31, 1939

Revenue from customers in rural power districts		$62,455.62
Cost of power as provided to be paid under Power Commission Act	$26,007.67	
Cost of operation, maintenance and administration	15,665.56	
Interest	7,430.19	
Provision for renewals	3,250.87	
Provision for sinking fund	1,750.90	
		54,105.19
Balance		$ 8,350.43

MANITOULIN, NIPISSING AND

Statement showing the net Credit or Charge in respect of power supplied to October 31, respect of power supplied in the year ending October 31, 1939, and the

Rural power district	Net credit or charge at October 31, 1938		Cash receipts and payments on account of such credits and charges; also adjustments made during the year	
	Credit	Charge	Credited	Charged
	$ c.	$ c.	$ c.	$ c.
Manitoulin		1,982.03		
Nipissing	17,333.34			
Sudbury				
Total	17,333.34	1,982.03		

THUNDER BAY SYSTEM

Rural Power Districts

Operating Account for Year Ended October 31, 1939

Revenue from customers in rural power districts		$23,211.36
Cost of power as provided to be paid under Power Commission Act	$9,081.34	
Cost of operation, maintenance and administration	6,615.00	
Interest	5,214.23	
Provision for renewals	2,238.58	
Provision for sinking fund	1,178.61	
		24,327.76
Balance		$ 1,116.40

MANITOULIN, NIPISSING AND SUDBURY RURAL POWER DISTRICTS

Statement showing Sinking Fund paid as part of the Cost of Power delivered and interest allowed thereon to October 31, 1939

Rural power districts	Total
	$ c.
Manitoulin	3,447.23
Nipissing	3,071.40
Sudbury	782.70
Total	7,301.33

SUDBURY RURAL POWER DISTRICTS

1938, the interest added during the year; also the net amount Credited or Charged in accumulated amount standing as a Credit or Charge at October 31, 1939

Interest at 4% per annum added during the year		Net amount credited or charged in respect of power supplied in the year ending October 31, 1939		Accumulated amount standing as a credit or charge on October 31, 1939	
Credited	Charged	Credited	Charged	Credit	Charge
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
	79.28		2,291.96		4,353.27
693.33		2,357.58		20,384.25	
		8,284.81		8,284.81	
693.33	79.28	10,642.39	2,291.96	28,669.06	4,353.27

NORTHERN ONTARIO PROPERTIES

(Operated by The Hydro-Electric Power Commission of Ontario)

FINANCIAL ACCOUNTS

For the Year ended October 31, 1939

Relating to Power Properties which are held and operated by the Commission in trust for the Province of Ontario, and which are situated in the following Northern Districts:

Nipissing Sudbury Abitibi Patricia-St. Joseph

STATEMENTS

Balance Sheet as at October 31, 1939

Operating Account for the Year ended October 31, 1939

Schedules supporting the Balance Sheet as at October 31, 1939
- Fixed Assets—By Districts
- Renewals Reserves
- Contingency and Obsolescence Reserves
- Sinking Fund Reserves

NORTHERN ONTARIO

Held and Operated by The Hydro-Electric Power

Balance Sheet as at

ASSETS

FIXED ASSETS:			
Nipissing district		$1,742,844.78	
Sudbury district		4,178,973.07	
Abitibi district		28,748,267.18	
Patricia district*		2,447,826.86	
St. Joseph district*		1,510,314.56	
Kenogami River:—Long Lac diversion		1,260,608.64	
			$39,888,835.09
CURRENT ASSETS:			
Employees' working funds		$5,825.55	
Hydro-Electric Power Commission of Ontario—Current account		54,888.33	
Sundry accounts receivable		41,685.10	
Power accounts receivable		388,958.80	
Interest accrued		19,430.21	
Consumers' deposits—securities:			
Bonds at par value	$558,000.00		
Stocks at book value	27,500.00		
		585,500.00	
Prepayments		35,133.86	
			1,131,421.85
INVENTORIES:			
Maintenance materials and supplies		$74,814.86	
Maintenance tools and equipment		69,083.08	
			143,897.94
DEFERRED ASSETS:			
Work in Progress—deferred work orders			6,613.35
UNAMORTIZED DISCOUNT ON DEBENTURES			435,473.33
SINKING FUND INVESTMENTS			1,941,351.44
			$43,547,593.00

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*During the year 1939 the Patricia district and the St. Joseph district were linked together by a tie transmission line and the physical properties are now operated as a co-ordinated generating and transmission system. In future these districts will be known as the Patricia-St. Joseph district.

PROPERTIES

Commission of Ontario in trust for the Province of Ontario

October 31, 1939

LIABILITIES AND RESERVES

LONG TERM LIABILITIES:		
Funded debt in the hands of the public	$29,500,000.00	
Advances from the Province of Ontario for capital expenditures	6,223,284.82	
Purchase agreement—Abitibi district: Transmission line	17,989.50	
		$35,741,274.32
CURRENT LIABILITIES:		
Power accounts—credit balances	$2,210.37	
Consumers' deposits	650,144.12	
Debenture interest accrued	108,333.32	
Miscellaneous interest accrued	181.37	
Miscellaneous accruals	14,893.40	
		775,762.58
RESERVES:		
Renewals	$2,128,303.65	
Contingencies and obsolescence	756,160.79	
Miscellaneous	20,960.23	
		2,905,424.67
SINKING FUND RESERVES:		
Represented by:		
Provincial advances repaid through sinking funds	$1,975,602.58	
Available balance	1,947,301.87	
		3,922,904.45
SURPLUS		202,226.98
		$43,547,593.00

Auditors' Certificate

We have examined the Accounts of the Northern Ontario Properties for the year ended the 31st October, 1939, and report that, in our opinion, the above Balance Sheet is properly drawn up so as to exhibit a true and correct view of the state of the affairs of Northern Ontario Properties at the 31st October, 1939, according to the best of our information and the explanations given to us and as shown by the books and records of the Properties. We have obtained all the information and explanations we have required.

OSCAR HUDSON AND CO.,
Chartered Accountants,
Auditors.

Dated at Toronto, Ontario,
29th February, 1940.

NORTHERN ONTARIO

EMBRACING THE NIPISSING, SUDBURY, ABITIBI, AND LONG LAC

Held and Operated by The Hydro-Electric

In Trust for the

Operating Account for the

COST OF OPERATION

Power purchased	$ 3,723.46
Operating, maintenance and administrative expenses	762,828.87
Interest	1,376,483.62
Provision for renewals	309,809.61
Provision for contingencies and obsolescence	201,638.41
Provision for sinking fund	1,147,414.01
Total cost	$3,801,897.98
Net income for year	379,302.95
	$4,181,200.93

PROPERTIES

PATRICIA-ST. JOSEPH DISTRICTS DIVERSION

Power Commission of Ontario

Province of Ontario

Year Ended October 31, 1939

REVENUE

Power sold to private companies and customers	$4,164,343.52
Power sold to rural power districts	16,857.41
	$4,181,200.93

Surplus Account—as at October 31, 1939

Deficits to October 31, 1937	$453,656.61		
Add: Interest to October 31, 1938, on amounts advanced by Province of Ontario for operating deficits	107,761.71	$561,418.32	
Advances from Province of Ontario for operating deficits	$466,003.10		
Add: Interest thereon to October 31, 1939	109,920.85		
	$575,923.95		
Less: Repayment March 31, 1939	300,000.00		$275,923.95
Net income for the year ended October 31, 1938			108,418.40
Net income for the year ended October 31, 1939			379,302.95
Balance at credit October 31, 1939		$202,226.98	
		$763,645.30	$763,645.30

NORTHERN ONTARIO PROPERTIES

Held and Operated by The Hydro-Electric Power Commission of Ontario in Trust for the Province of Ontario

Fixed Assets—October 31, 1939

District	Net capital expenditures in the year	Fixed Assets				
		Under construction	In service			Total
			Water rights and intangible items	Physical property		
				Non-renewable	Renewable	
Nipissing:	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
Power Plants:						
South river:						
Nipissing	3,587.24	1,346.87	....	11,089.60	241,362.21	253,798.68
Bingham Chute	22.69	522.69	....	11,593.60	227,839.43	239,955.72
Elliot Chute	298.40	298.40	....	119,307.09	335,149.71	454,755.20
Storage Dams	....	....	....	....	76,122.70	76,122.70
Miscellaneous	....	....	....	....	6,390.46	6,390.46
Intangible	....	....	69,478.34	....	....	69,478.34
	3,908.33	2,167.96	69,478.34	141,990.29	886,864.51	1,100,501.10
Transformer Stations	11,945.10	2,606.06	....	....	28,949.77	31,555.83
Transmission Lines	8,599.08	....	....	....	209,331.30	209,331.30
Local Systems	*5,278.71*	....	22,649.50	....	378,807.05	401,456.55
	19,173.80	4,774.02	92,127.84	141,990.29	1,503,952.63	1,742,844.78
Sudbury:						
Power Plants:						
Wanapitei river:						
Coniston	7,163.25	1,380.15	....	13,200.00	673,488.99	688,069.14
McVitties	*11,965.78*	....	....	19,595.82	387,544.52	407,140.34
Stinson	2,065.15	....	....	33,000.00	641,832.99	674,832.99
Storage dam	....	....	....	25.00	194,870.00	194,895.00
Intangible	....	....	830,514.53	....	....	830,514.53
Sturgeon river:						
Crystal Falls and Storage Dams	14,715.03	460.16	....	44,056.02	785,603.95	830,120.13
	11,977.65	1,840.31	830,514.53	109,876.84	2,683,340.45	3,625,572.13
Transformer Stations	1,150.57	348.52	....	....	110,017.35	110,365.87
Transmission Lines	20,386.96	17,306.71	....	....	425,728.36	443,035.07
Local Systems	*46,800.08*	....	....	....	....	....
	13,284.90	19,495.54	830,514.53	109,876.84	3,219,086.16	4,178,973.07
Abitibi:						
Power Plants:						
Abitibi river:						
Abitibi Canyon	*62,883.07*	2,564.03	....	5,373,977.93	14,268,677.67	19,645,219.63
Frederick House Dam	*42,294.21*	6,305.11	485,408.80	110,435.95	495,567.23	1,097,717.09
	105,177.28	8,869.14	485,408.80	5,484,413.88	14,764,244.90	20,742,936.72
Transformer Stations	577,740.86	398,613.64	....	215,856.69	1,195,576.22	1,810,046.55
Transmission Lines	260,771.92	18,429.71	....	825,779.89	5,274,668.85	6,118,878.45
Local Systems	16,608.51	567.95	....	....	75,837.51	76,405.46
	749,944.01	426,480.44	485,408.80	6,526,050.46	21,310,327.48	28,748,267.18

NORTHERN ONTARIO PROPERTIES

Held and Operated by The Hydro-Electric Power Commission of Ontario in Trust for the Province of Ontario

Fixed Assets—October 31, 1939

District	Net capital expenditures in the year	Fixed Assets				
		Under construction	In service			Total
			Water rights and intangible items	Physical property		
				Non-renewable	Renewable	
	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
Patricia:*						
Power Plants:						
English river:						
Ear Falls	525,167.61	505,473.92	....	1,120,039.37	....	1,625,513.29
Transformer Stations	22,247.53	36.96	....	29,285.65	....	29,322.61
Transmission Lines	517,969.23	59,954.37	....	700,611.10	....	760,565.47
Local Systems	22,290.04	....	....	32,425.49	....	32,425.49
	1,087,674.41	565,465.25	....	1,882,361.61	....	2,447,826.86
St. Joseph:*						
Power Plants:						
Albany river:						
Rat Rapids	2,213.18	....	....	674,590.27	....	674,590.27
Donation in aid of construction	....	....	....	*80,000.00*	....	*80,000.00*
	2,213.18	....	....	594,590.27	....	594,590.27
Transformer Stations	109,204.20	149.29	....	114,083.93	....	114,233.22
Transmission Lines	684,285.31	....	....	801,491.07	....	801,491.07
	795,702.69	149.29	....	1,510,165.27	....	1,510,314.56
Kenogami River:						
Long Lac Diversion	239,355.20	....	....	1,260,608.64	....	1,260,608.64

SUMMARY

District	Net capital expenditures in the year	Fixed Assets				
		Under construction	In service			Total
			Water rights and intangible items	Physical property		
				Non-renewable	Renewable	
	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
Nipissing district	19,173.80	4,774.02	92,127.84	141,990.29	1,503,952.63	1,742,844.78
Sudbury district	*13,284.90*	19,495.54	830,514.53	109,876.84	3,219,086.16	4,178,973.07
Abitibi district	749,944.01	426,480.44	485,408.80	6,526,050.46	21,310,327.48	28,748,267.18
Patricia district*	1,087,674.41	565,465.25	....	1,882,361.61	....	2,447,826.86
St. Joseph district*	795,702.69	149.29	....	1,510,165.27	....	1,510,314.56
Kenogami river—Long Lac diversion	239,355.20	....	....	1,260,608.64	....	1,260,608.64
	2,878,565.21	1,016,364.54	1,408,051.17	11,431,053.11	26,033,366.27	39,888,835.09

*During the year 1939 the Patricia district and the St. Joseph district were linked together by a tie transmission line and the physical properties are now operated as a co-ordinated generating and transmission system. In future these districts will be known as the Patricia-St. Joseph district.

NORTHERN ONTARIO PROPERTIES

**Embracing the Nipissing, Sudbury, Abitibi and Patricia-St. Joseph Districts
Held and Operated by The Hydro-Electric Power Commission of Ontario
In Trust for the Province of Ontario**

Renewals Reserve—October 31, 1939

Balance at November 1, 1938		$1,755,942.75	
Deduct—Reserve transferred in respect of Sudbury rural power district, November 1, 1938		509.58	
		$1,755,433.17	
Provision in the year	$309,809.61		
Interest at 4% on reserve balance	70,217.33		
Adjustments re transfer of equipment	2,141.89		
		382,168.83	
Sub-total		$2,137,602.00	
Expenditures in the year		9,298.35	
Balance at October 31, 1939			$2,128,303.65

Contingencies and Obsolescence Reserve—October 31, 1939

Balance at November 1, 1938		$610,079.25	
Deduct—Reserve transferred in respect of Sudbury rural power district, November 1, 1938		254.79	
		$609,824.46	
Provision in the year	$201,638.41		
Interest at 4% on reserve balance	24,392.98		
Adjustments re transfer of equipment	56.00		
		226,087.39	
Sub-total		$835,911.85	
Contingencies met with during year		79,751.06	
Balance at October 31, 1939			$756,160.79

Sinking Fund Reserve—October 31, 1939

Balance at November 1, 1938		$2,665,151.42	
Additional provision to October 31, 1938		105,135.98	
		$2,770,287.40	
Deduct—Reserve transferred in respect of Sudbury rural power district, November 1, 1938		454.30	
		$2,769,833.10	
Provision in the year	$1,042,278.03		
Interest at 4% on reserve balance	110,793.32		
		1,153,071.35	
Balance at October 31, 1939			$3,922,904.45

THE HAMILTON STREET RAILWAY COMPANY

(A Subsidiary of The Hydro-Electric Power Commission of Ontario—
Niagara System)

FINANCIAL ACCOUNTS

For the Year ended October 31, 1939

Balance Sheet as at October 31, 1939

Operating and Income Accounts for the Year ended October 31, 1939

THE HAMILTON STREET

(A Subsidiary of The Hydro-Electric Power

Balance Sheet as at

ASSETS

FIXED ASSETS:		
Properties, road and equipment, buses, franchises, etc.		$4,218,426.34
CURRENT ASSETS:		
Cash in bank	$98,087.77	
Conductors' and employees' advances	12,000.00	
Hydro-Electric Power Commission of Ontario—Current account	10,962.01	
Accounts receivable	2,637.91	
Prepayments	4,996.60	
		$128,684.29
MATERIALS AND SUPPLIES		49,752.17
RESERVE FUNDS—INVESTMENTS		149,372.40
		$4,546,235.20

RAILWAY COMPANY

Commission of Ontario—Niagara System)

October 31, 1939

LIABILITIES AND RESERVES

Capital Stock:		
Authorized—80,000 shares at a par value of $50.00 each	$4,000,000.00	
Issued —64,100 shares at a par value of $50.00 each		$3,205,000.00
Current Liabilities:		
Customers' deposit		90.00
Reserves:		
Depreciation—road and equipment	$1,234,015.87	
Insurance	57,105.82	
Miscellaneous	36,741.85	
		1,327,863.54
Surplus		13,281.66
		$4,546,235.20

Auditors' Certificate

We have examined the Accounts of The Hamilton Street Railway Company for the year ended the 31st October, 1939, and report that, in our opinion, the above Balance Sheet is properly drawn up so as to exhibit a true and correct view of the state of the Company's affairs at the 31st October, 1939, according to the best of our information and the explanations given to us and as shown by the books of the Company. We have obtained all the information and explanations we have required.

Oscar Hudson and Co.,
Chartered Accountants,
Auditors

Dated at Toronto, Ontario,
29th February, 1940.

THE HAMILTON STREET RAILWAY COMPANY

(A Subsidiary of The Hydro-Electric Power Commission of Ontario—Niagara System) Operating Statement for the Year Ended October 31, 1939

	Tramways	Buses	Total
	$ c.	$ c.	$ c.
REVENUES:			
Transportation	788,652.40	229,937.45	1,018,589.85
Other operations	9,093.30	674.57	9,767.87
	797,745.70	230,612.02	1,028,357.72
EXPENSES:			
Maintenance of way and structures	60,523.27	....	60,523.27
Maintenance of equipment	64,877.04	40,432.09	105,309.13
Power purchased	111,551.87	....	111,551.87
Transportation expenses	247,925.96	119,065.03	366,990.99
Traffic expenses	56.50	....	56.50
General and miscellaneous expenses	72,318.46	11,592.58	83,911.04
Depreciation provision	50,000.00	8,118.70	58,118.70
Taxes (Municipal and Franchise)	54,211.45	11,168.09	65,379.54
	661,464.55	190,376.49	851,841.04
NET REVENUE FOR YEAR	136,281.15	40,235.53	176,516.68

Surplus Account—as at October 31, 1939

	$ c.	$ c.
Balance at credit October 31, 1938	....	13,992.64
Net revenue for year ended October 31, 1939	....	176,516.68
Income from investments—reserve funds	....	1,515.92
Appropriation for renewals reserve	1,010.62	....
Appropriation for insurance reserve	505.30	....
Dividend	177,227.66	....
Balance at credit October 31, 1939	13,281.66	....
	192,025.24	192,025.24

SECTION X

MUNICIPAL ACCOUNTS

and

Statistical Data Relating to Hydro-Electric Distribution Systems Operated by Individual Municipalities Served by The Hydro-Electric Power Commission of Ontario

The Municipal Accounts section of this report presents in summary, and individually, the results of the operation of the local electrical utilities in municipalities owning their own distributing systems and operating with energy supplied by or through The Hydro-Electric Power Commission.

Financial statements prepared from the books of these "Hydro" utilities are submitted herein to show how each has operated during the past year, and its financial status at the present time. Other tables give useful statistical information respecting average costs for the various classes of service and the rates in force.

The books of account of the electrical utilities in all municipalities which have contracted with The Hydro-Electric Power Commission of Ontario for a supply of power are kept in accordance with an accounting system designed by the Commission. During the year 1939 this standard method of accounting was installed in Arnprior, Millbrook, Morrisburg, Orono, and Sioux Lookout.

Periodical inspections are made of the books of all "Hydro" electrical utilities and local officials are assisted in the improvement of their office routine with a view to standardizing, as far as possible, the methods employed. In the majority of the smaller municipalities much of the book-keeping for the electrical utilities is performed by representatives of the municipal accounting department of the Commission as a measure of economy. This arrangement insures the correct application of the standard accounting system, with resultant uniformity in classification of revenues and expenditures; secures true reflections of the actual operating results for the year, and greatly enhances the comparative values of the reports.

The first financial statement in this section presents consolidated balance sheets for each year since 1913, and thus shows the march of progress. It combines the balance sheets of the local municipal utilities of all the systems. It is worth noting that the total plant value has increased from $10,081,469.16

in 1913 to $99,489,754.98 in 1939, and the total assets from $11,907,826.86 to $173,522,878.40. The liabilities have not increased in the same proportion as the assets, rising from $10,468,351.79 to a maximum of $52,685,316.86 in 1932, and receding to $34,241,489.78 in 1939. The reasons for this are the regular fulfilment of debt retirement schedules under serial debenture provisions or by maturity of sinking funds, and also the fact that much of the cost of the increasing plant value has been financed out of reserves and surplus without increasing the capital liabilities of the respective utilities. By this procedure the funds of the systems are used to best advantage. Examination of the results will also show that there is a steady decline in the percentage of net liabilities to total assets; being from 88.0 per cent in 1913 to 19.3 per cent in 1939. The equities in The Hydro-Electric Power Commission's systems automatically acquired through the inclusion of sinking funds as part of the cost of power are not taken into account in arriving at these percentages.

The second financial statement presents consolidated operating reports for each year since "Hydro" service was inaugurated and combines the results from the local municipal utilities of all the systems. After providing for every cost of operation and fixed charges, including the standard provision for depreciation, the combined operating reports show a net surplus of $866,909.54 for 1939. (See also diagrams in Foreword to Report.)

The five statements, "A" to "E", following the two consolidated reports show the financial status of each municipal utility and the results of operations, giving classified information respecting revenue, operating costs, number of consumers and consumption, cost of power to municipalities, power and lighting rates charged to consumers, etc. In statements "A" and "B", the municipalities are arranged alphabetically under each system; in statement "D" the municipalities are arranged in three groups—cities, towns and small municipalities; in statements "C" and "E" all municipalities are arranged alphabetically.

Statement "A" presents the balance sheet of each electrical utility. The plant values are shown under the general subdivisions specified in the standard accounting system and the other items on the positive side of the ledger which are included in total assets are self-explanatory with the exception, perhaps, of the item entitled "equity in H-E.P.C. systems." The sinking fund portion of the cost paid year by year to the Commission for power is for the purpose of ultimately retiring the capital liabilities incurred by the Commission on behalf of the municipalities. A municipality's aggregate equity in the Commission's systems at any time is the total of the sinking fund payments that have been credited to it, together with interest. The total sinking fund equity acquired by these municipalities to the end of 1939 is shown in the consolidated balance sheet to be $48,615,296.94.

In conformity with a policy of service at cost to the customer, refunds by cash or credit were made during the year in many municipalities from surplus funds accrued to the credit of municipal services, such as street lighting, water works, sewage disposal, etc., and to individual customers. The amounts of the accumulated surplus rebated equalled, in different municipalities, from five per cent to twenty per cent of the previous year's revenue. The total thus returned to customers during the year 1939 amounted in round figures to $500,000.00.

In each case the balance sheet includes the credit or charge representing the difference between the monthly payments for power at interim rates and the cost of power as ascertained by the Commission upon annual adjustment.

The reserves for depreciation, and the acquired equity in The Hydro-Electric Power Commission's systems, are listed individually and totalled; and under the heading "surplus" are included not only the free operating surplus but the accumulation of sinking fund applicable to debenture debt and also the amount of debentures already retired out of revenue.

The depreciation reserve now amounts to 27.7 per cent of the total depreciable plant, while the depreciation reserve and surplus combined have already reached the sum of $87,575,620.34, approximately 88.0 per cent of the total plant cost.

Statement "B" shows detailed operating reports for each municipal electrical utility. It gives annual revenues from the various classes of consumers; the items of expenditure which make up the total annual expenditure and the sums set aside for depreciation. The population served by each local utility and the number of consumers of each class are also shown.

The item "power purchased" in this statement includes the debit or credit balances ascertained by the annual adjustment of the cost of power supplied to the municipalities by the Commission.

Of the 293 municipal electric utilities included in this statement, 229 received from consumers revenue sufficient to meet in full all operating expenses, interest, debt retirement instalments, and standard depreciation reserve allocation and to yield an aggregate net surplus of $1,053,245.51 for the year; 52 were able to defray out of revenue all such charges except a portion of the standard depreciation allocation aggregating $156,854.68, in the case of 12 utilities the revenue was less than the total operating expenses, interest and debt retirement instalments by $9,248.43.

Statement "C" shows the installation of street lights in each municipality together with the rates approved by this Commission, the revenue for 1939, and the cost per capita in each municipality.

Statement "D" presents statistics relating to the supply of electrical energy to consumers in Ontario municipalities served by the Commission. It shows the reveune, kilowatt-hour consumption, number of consumers, average monthly consumption, average monthly bill and the net average cost per kilowatt-hour both for domestic and for commercial light service in each municipality. For power service this statement shows the revenue, the number of consumers and the average horsepower supplied by the municipal utility.* For further reference to this informative statement, consult the special introduction to it on page 328.

Statement "E" presents the cost per horsepower of the power provided for and delivered to the municipalities by the Commission, and the local rates to consumers in force in the respective municipalities, during the year 1939, for domestic service, for commercial light service and for power service.

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*The statistics include retail power only. Wholesale industrial power as supplied by the Commission direct, is reported in Section IX.

CONSOLIDATED

YEAR	1913	1914	1915
Number of municipalities included	45	69	99
ASSETS	$ c.	$ c.	$ c.
Lands and buildings	626,707.34	791,732.20	873,838.18
Substation equipment	1,090,875.69	1,476,087.84	1,582,062.56
Distribution system—overhead	2,690,834.74	3,422,763.93	4,234,626.05
Distribution system—underground	644,514.24	807,153.53	928,420.77
Line transformers	615,546.20	787,613.52	981,754.70
Meters	840,606.64	1,172,475.11	1,418,165.08
Street lighting equipment—regular	900,614.80	1,071,255.37	1,309,628.49
Street lighting equipment—ornamental	62,765.34	270,386.55	197,644.82
Miscellaneous construction expenses	866,551.89	2,062,035.90	1,701,182.66
Steam or hydraulic plant	1,401,175.28	420,108.33	461,651.60
Old plant	341,277.00	619,513.12	1,184,372.86
Total plant	10,081,469.16	12,901,125.40	14,873,347.77
Bank and cash balance	450,887.97	422,350.12	284,653.96
Securities and investments	....	....	....
Accounts receivable	344,487.95	561,873.08	602,920.69
Inventories	540,274.58	615,226.76	726,556.76
Sinking fund on local debentures	431,747.27	625,217.03	868,983.78
Equity in H-E.P.C. systems	....	....	....
Other assets	58,959.93	123,410.97	326,801.11
Total assets	11,907,826.86	15,249,203.36	17,683,264.07
LIABILITIES			
Debenture balance	8,711,308.37	10,678,078.36	11,831,811.03
Accounts payable	1,553,711.45	1,682,150.29	2,040,038.01
Bank overdraft	160,919.16	228,622.50	292,106.44
Other liabilities	42,412.81	113,838.66	37,388.31
Total liabilities	10,468,351.79	12,702,689.81	14,201,343.79
RESERVES			
For equity in H-E.P.C. systems	....	....	....
For depreciation	478,145.88	850,618.07	1,337,739.73
Other reserves	....	....	....
Total reserves	478,145.88	850,618.07	1,337,739.73
SURPLUS			
Debentures paid	202,751.26	320,129.10	394,466.22
Local sinking fund	431,747.27	625,217.03	868,983.78
Operating surplus	326,830.66	750,549.35	880,730.55
Total surplus	961,329.19	1,695,895.48	2,144,180.55
Total liabilities, reserves and surplus	11,907,826.86	15,249,203.36	17,683,264.07
Percentage of net debt to total assets	88.0	88.3	80.3

NOTE—In computing the "percentage of net debt to total assets" the ornamental street lighting capital, sinking fund on local debentures, and equity in H-E.P.C. systems, are excluded

BALANCE SHEET

1916	1917	1918	1919	1920	1921
128	143	166	191	195	215
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
1,335,936.33	1,546,241.41	1,859,888.69	1,995,545.83	2,175,568.24	3,230,985.63
1,934,626.12	2,471,293.82	2,820,488.70	2,915,125.56	3,231,050.80	5,403,689.90
4,832,353.27	6,090,073.42	6,627,237.39	7,445,820.31	8,579,881.49	8,397,361.48
1,095,709.62	1,157,059.90	1,216,288.59	1,206,296.88	1,313,369.29	1,401,135.97
1,179,132.07	1,483,839.44	1,772,691.35	2,073,113.45	2,560,581.59	3,077,649.83
1,711,299.49	1,999,095.48	2,238,143.70	2,587,566.32	3,053,135.20	3,552,076.79
1,251,057.13	1,237,734.69	1,200,625.65	1,206,638.71	1,269,006.98	1,335,997.13
306,388.95	361,975.74	531,502.61	546,497.68	557,678.13	610,586.70
2,059,263.42	2,184,015.84	2,395,096.50	2,530,101.08	2,697,636.12	3,030,134.16
864,500.01	896,753.20	214,575.75	986,200.57	757,194.47	704,848.46
759,748.66	649,852.51	1,476,413.00	805,959.89	864,298.39	912,388.55
17,330,015.07	20,077,935.45	22,352,951.93	24,298,866.28	27,059,400.70	31,656,854.60
1,061,029.90	340,026.50	391,194.91	462,437.23	943,858.12	900,842.34
....	....	....	627,076.53	341,855.88	477,678.69
695,152.23	1,285,097.33	1,124,018.44	1,921,166.69	2,022,538.88	2,155,788.62
764,504.59	1,261,398.36	972,996.96	1,032,569.75	1,400,671.89	1,504,596.28
1,166,017.73	1,337,578.96	1,663,298.05	1,925,455.77	2,244,004.34	2,541,718.35
....	....	....	369,071.89	577,584.06	795,570.51
342,215.87	125,240.05	444,787.63	86,216.05	25,447.07	78,929.84
21,358,935.39	24,427,276.65	26,949,247.92	30,722,860.19	34,615,360.94	40,111,979.23
15,058,641.57	15,593,773.61	17,209,217.70	18,133,462.44	19,268,072.04	21,619,220.99
969,187.75	1,537,669.11	1,007,727.79	1,420,926.66	1,840,137.54	1,887,567.93
178,413.26	886,177.94	576,816.49	403,235.57	514,671.99	989,099.98
491,874.90	429,104.20	350,013.21	670,271.90	642,293.65	938,368.84
16,698,117.48	18,446,724.86	19,143,775.19	20,627,896.57	22,265,175.22	25,434,257.74
....	....	....	373,871.89	577,584.06	800,249.05
1,843,804.68	2,463,723.83	3,133,550 17	3,750,162.28	4,788,645.03	5,491,858.93
....	....	....	....	....	....
1,843,804.68	2,463,723.83	3,133,550,17	4,124,034.17	5,366,229.09	6,292,107.98
549,778.59	694,797.90	920,076.56	1,328,657.68	1,440,156 52	1,860,079.53
1,165,785.94	1,340,615.38	1,662,602.69	1,754,020.37	2,246,474.47	2,541,718.35
1,101,448.70	1,481,414.68	2,089,243.31	2,888,251.40	3,297,325.64	3,983,815.63
2,817,013.23	3,516,827.96	4,671,922.56	5,970,929.45	6,983,956.63	8,385,613.51
21 358,935.39	24,427,276.65	26,949,247.92	30,722,860.19	34,615,360.94	40,111,979.23
78.4	75.5	71.0	67.9	65.4	64.7

from assets; and the total liabilities are reduced by the amount of the local sinking fund reserve, and the liability in respect to the ornamental street lighting capital, which amount is included in other liabilities.

CONSOLIDATED

YEAR	1922	1923	1924
Number of municipalities included	226	235	248
ASSETS	$ c.	$ c.	$ c.
Lands and buildings	3,334,522.68	4,488,054.93	4,561,648.92
Substation equipment	5,046,857.98	6,015,919.75	6,800,238.00
Distribution system—overhead	11,165,330.24	13,135,581.76	14,182,190.33
Distribution system—underground	1,598,053.02	1,959,120.41	2,873,446.13
Line transformers	3,618,684.73	4,211,655.89	4,456,669.02
Meters	4,033,689.52	4,548,933.73	5,149,629.71
Street lighting equipment—regular	1,419,016.05	1,061,473.85	1,134,491.77
Street lighting equipment—ornamental	666,084.50	708,431.22	728,298.08
Miscellaneous construction expenses	3,261,495.74	3,681,274.88	4,168,262.21
Steam or hydraulic plant	565,158.54	566,619.86	4,196,803.45
Old plant	7,997,947.87	8,051,496.28	5,587,420.31
Total plant	42,706,840.87	48,428,562.56	53,839,097.93
Bank and cash balance	1,164,336.24	1,276,140.06	1,748,912.34
Securities and investments	443,938.18	1,153,424.47	1,329,622.58
Accounts receivable	3,874,317.14	3,198,769.34	3,898,751.89
Inventories	1,738,795.96	1,819,711.62	1,745,628.16
Sinking fund on local debentures	3,416,231,45	3,896,261.28	4,520,723.06
Equity in H-E.P.C. systems	1,543,434.12	2,929,603.94	5,420,567.58
Other assets	238,940.13	190,071.63	250,292.77
Total assets	55,126.834,09	62,892,544.90	72,753,596.31
LIABILITIES			
Debenture balance	30,454,186.12	33,056,501.29	38,005,162.50
Accounts payable	3,699,292.52	3,708,781.76	3,117,224.08
Bank overdraft	456,706.69	680,714.59	162,100.71
Other liabilities	586,203.02	1,517,828.47	1,780,564.27
Total liabilities	35,196,388.35	38,963,826.11	43,065,051.56
RESERVES			
For equity in H-E.P.C. systems	1,543,434.12	2,929,603.94	5,420,567.58
For depreciation	6,512,813.92	7,328,858.69	8,097,834.68
Other reserves	....	....	....
Total reserves	8,056,248.04	10,258,462.63	13,518,402.26
SURPLUS			
Debentures paid	3,104,591.15	2,852,038.38	3,530,610.35
Local sinking fund	3,416,231.45	3,896,261.28	4,520,723.06
Operating surplus	5,353,375.10	6,921,956.50	8,118,809.08
Total surplus	11,874,197.70	13,670,256.16	16,170,142.49
Total liabilities, reserves and surplus	55,126,834.09	62,892,544.90	72,753,596.31
Percentage of net debt to total assets	63.3	62.6	61.4

BALANCE SHEET—Continued

1925	1926	1927	1928	1929
247	251	252	256	260
$ c.	$ c.	$ c.	$ c.	$ c.
5,768,855.99	6,111,162.54	6,486,426.89	7,024,646.76	7,469,451.46
8,543,166.55	9,505,501.77	15,088,905.14	16,866,186.21	18,102,792.13
16,837,535.57	18,654,240.54	16,689,462.41	17,688,050.68	18,108,016.82
3,388,837.09	3,689,569.95	3,278,382.58	3,559,288.16	4,823,369.60
5,079,754.23	5,538,605.24	5,985,521.37	6,549,674.64	7,312,742.17
5,533,483.92	5,963,162.51	6,346,660.59	6,839,802.90	7,405,478.91
1,256,916.53	1,309,608.30	1,399,314.06	1,486,646.24	1,594,183.25
893,186.48	1,103,660.23	1,184,035.82	1,203,706.65	1,458,349.64
4,485,110.96	3,456,777.71	3,360,671.09	3,394,626.92	3,483,487.78
568,912.49	628,909.57	607,320.00	619,880.93	489,097.57
4,549,142.46	4,655,422.59	5,095,555.90	5,032,089.26	5,093,378.75
56,904,902.27	60,616,620.95	65,522,255.85	70,264,599.35	75,340,348.08
1,700,145.30	2,136,290.79	3,014,832.48	1,342,367.07	858,733.68
1,095,662.92	1,400,316.43	1,696,237.66	1,837,140.51	2,001,088.81
3,417,558.86	3,508,817.87	3,715,770.72	4,097,446.13	4,683,201.97
1,711,504.13	1,397,667.83	1,412,729.41	1,220,186.10	1,365,033.58
5,202,451.70	5,599,675.01	6,398,909.77	7,071,273.69	7,753,613.88
7,551,588.70	8,046,868.53	10,143,205.66	12,326,097.56	14,754,865.40
137,280.05	33,151.81	31,942.45	153,275.04	152,260.86
77,721,093.93	82,739,409.22	91,935,884.00	98,312,385.45	106.909,146.26
37,919,225.01	39,602,533.48	42,891,361.57	42,597,175.78	42,930,127.74
3,139,067.92	3,118,684.78	2,988,621.90	3,074,634.25	3,132,145.03
226,147.82	163,725.53	252,362.52	253,143.81	412,056.69
1,075,914.83	1,087,795.08	1,154,810.24	1,258,610.23	1.621,378.17
42,360,355.58	43,972,738.87	47,287,156.23	47,183,564.07	48,095,707.63
7,551,588.70	8,046,868.53	10,143,205.66	12,326,097.56	14,754,865.40
8,699,437.68	9,360,322.27	10,319,889.05	11,140,795.68	11,911,154.49
1,157,147.20	947,970.23	1,002,916.69	1,117,257.63	1,437,371.26
17,408,173.58	18,355,161.03	21,466,011.40	24,584,150.87	28,103.391.15
4,440,138.34	5,493,879.83	6,648,767.38	7,928,907.61	9.194,253.59
5,202,451.70	5,599,675.01	6,398,909.77	7,071,273.69	7.962,121.20
8,309,974.73	9,317,954.48	10,135,039.22	11,544,489.21	13,553,672.69
17,952,564.77	20,411,509.32	23,182,716.37	26,544,670.51	30,710,047.48
77,721,093.93	82,739,409.22	91,935,884.00	98,312,385.45	106,909,146.26
57.2	55.5	54.2	50.8	47.8

CONSOLIDATED

YEAR	1930	1931	1932
Number of municipalities included	267	275	280
ASSETS	$ c.	$ c.	$ c.
Lands and buildings	7,936,974.31	8,407,664.48	9,503,743.78
Substation equipment	19,485,056.28	21,013,956.74	22,288,781.68
Distribution system—overhead	19,220,326.48	19,918,355.76	20,866,767.32
Distribution system—underground	4,932,189.05	5,361,627.24	5,820,056.75
Line transformers	7,953,090.23	8,649,875.07	9,392,662.62
Meters	7,840,948.07	8,106,202.88	8,403,251.67
Street lighting equipment—regular	1,780,785.67	2,205,613.18	2,257,618.20
Street lighting equipment—ornamental	1,520,891.01	1,456,742.91	1,545,354.93
Miscellaneous construction expenses	3,996,747.77	3,827,132.05	4,120,926.11
Steam or hydraulic plant	139,587.28	458,374.05	498,231.69
Old plant	5,322,690.14	7,146,437.96	4,989,654.97
Other plants not distributed	....	....	200,000.00
Total plant	80,129,286.29	86,551,982.32	89,887,049.72
Bank and cash balance	2,722,250.12	2,738,319.67	3,185,442.00
Securities and investments	1,909,439.11	1,999,846.42	2,059,325.10
Accounts receivable	4,481,006.92	3,957,972.78	3,683,059.42
Inventories	1,242,994.51	1,276,531.01	1,232,209.52
Sinking fund on local debentures	8,396,255.47	8,735,050.84	9,099,210.61
Equity in H-E.P.C. systems	17,346,372.44	20,103,275.76	23,066,129.81
Other assets	173,030.05	174,879.28	163,637.79
Total assets	116,400,634.91	125,537,858.08	132,376,063.97
LIABILITIES			
Debenture balance	45,091,808.06	44,594,400.03	45,133,305.97
Accounts payable	3,001,186.21	5,382,306.13	3,512,724.58
Bank overdraft	405,663.14	312,575.54	298,910.20
Other liabilities	1,642,771.59	1,909,986.13	3,740,376.11
Total liabilities	50,141,429.00	52,199,267.83	52,685,316.86
RESERVES			
For equity in H-E.P.C. systems	17,346,372.44	20,103,275.76	23,066,129.81
For depreciation	12,885,387.51	13,748,049.68	14,902,177.02
Other reserves	1,574,655.74	1,693,129.83	1,902,308.64
Total reserves	31,806,415.69	35,544,455.27	39,870,615.47
SURPLUS			
Debentures paid	10,728,279.15	13,150,040.37	15,244,778.28
Local sinking fund	8,396,255.47	8,735,050.84	9,099,210.61
Operating surplus	15,328,255.60	15,909,043.77	15,476,142.75
Total surplus	34,452,790.22	37,794,134.98	39,820,131.64
Total liabilities, reserves and surplus	116,400,634.91	125,537,858.08	132,376,063.97
Percentage of net debt to total assets	46.0	44.1	43.4

BALANCE SHEET—Continued

1933	1934	1935	1936	1937
282	282	284	283	287
$ c.	$ c.	$ c.	$ c.	$ c.
10,186,471.28	10,262,692.98	10,381,191.41	10,528,595.34	10,785,473.59
22,306,800.94	22,327,618.75	22,072,115.14	22,162,208.03	22,900,269.21
21,152,681.20	21,353,725.80	21,650,567.75	22,163,701.17	22,699,652.43
5,945,225.61	6,031,767.74	6,068,724.47	6,070,337.02	6,100,282.76
9,478,605.14	9,635,279.35	9,678,578.13	9,845,939.94	10,128,591.29
8,514,165.03	8,624,504.78	8,767,892.27	9,043,615.65	9,234,773.90
2,381,599.40	2,395,296.48	2,420,238.81	2,527,188.03	2,610,137.97
1,458,443.68	1,464,306.73	1,486,302.46	1,504,596.77	1,508,564.76
4,040,859.74	3,907,359.92	3,616,986.74	4,019,430.59	4,389,592.08
502,978.62	494,932.96	496,050.14	496,186.33	496,186.33
5,016,755.92	4,978,079.44	4,917,917.43	4,876,405.43	4,878,609.01
200,000.00	200,000.00	200,000.00	200,000.00	....
91,184,586.56	91,675,564.93	91,756,564.75	93,438,204.30	95,732,133.33
1,696,489.24	2,215,914.31	2,927,485.90	3,921,121.28	3,080,864.13
2,163,785.20	2,382,446.41	2,593,633.59	2,924,913.30	4,469,369.04
3,746,910.92	4,001,596.09	4,363,297.95	4,560,713.55	4,240,741.41
1,226,043.30	1,110,705.38	1,212,063.37	1,261,843.81	1,336,527.60
9,386,176.58	9,161,419.77	9,086,152.46	9,535,712.83	10,003,873.93
26,045,679.00	29,274,340.46	32,609,979.83	36,193,874.21	40,032,438.34
253,581.84	289,158.19	301,317.86	203,167.35	186,252.23
135,703,252.64	140,111,145.54	144,850,495.71	152,039,550.63	159,082,200.01
42,606,145.29	39,646,989.68	36,667,080.62	34,485,507.43	32,447,411.68
3,320,485.45	3,149,035.07	2,931,934.14	2,879,497.45	2,912,960.24
206,398.00	143,556.95	72,084.93	25,559.95	34,787.51
3,787,725.14	3,669,008.56	3,462,906.61	3,267,141.59	3,216,028.08
49,920,753.88	46,608,590.26	43,134,006.30	40,657,706.42	38,611,187.51
26,045,679.00	29,274,340.46	32,609,979.83	36,193,874.21	40,032,438.34
16,075,959.28	17,426,809.32	18,410,891.84	19,666,170.18	21,034,164.68
2,048,081.84	2,056,820.81	2,459,074.98	2,763,100.40	2,802,650.84
44,169,720.12	48,757,970.59	53,479,946.65	58,623,144.79	63,869,253.86
17,651,367.71	20,608,129.73	23,481,974.13	26,084,294.84	28,468,539.78
9,386,176.58	9,161,419.77	9,086,152.46	9,535,712.83	10,003,873.93
14,575,234.35	14,975,035.19	15,668,416.17	17,138,691.75	18,129,344.93
41,612,778.64	44,744,584.69	48,236,542.76	52,758,699.42	56,601,758.64
135,703,252.64	140,111,145.54	144,850,495.71	152,039,550.63	159,082,200.01
40.4	35.9	32.0	28.3	25.2

CONSOLIDATED BALANCE SHEET—Concluded

YEAR	1938	1939
Number of municipalities included	288	293
ASSETS	$ c.	$ c.
Lands and buildings	10,894,019.12	11,030,623.50
Substation equipment	23,614,597.80	23,780,655.18
Distribution system—overhead	23,371,092.61	23,925,362.60
Distribution system—underground	6,134,283.64	6,202,371.87
Line transformers	10,494,789.40	10,855,346.75
Meters	9,539,413.66	9,838,600.98
Street lighting equipment—regular	2,697,047.84	2,798,171.62
Street lighting equipment—ornamental	1,516,059.81	1,518,035.24
Miscellaneous construction expenses	4,444,880.40	4,147,280.84
Steam or hydraulic plant	497,974.74	498,650.81
Old plant	4,897,097.67	4,894,655.59
Total plant	98,101,256.69	99,489,754.98
Bank and cash balance	3,043,609.87	3,107,087.65
Securities and investments	4,832,322.57	4,850,531.80
Accounts receivable	4,106,655.16	4,774,816.58
Inventories	1,393,158.18	1,496,275.62
Sinking fund on local debentures	10,397,958.20	11,032,594.44
Equity in H-E.P.C. systems	44,254,118.64	48,615,296.94
Other assets	178,534.60	156,520.39
Total assets	166,307,613.91	173,522,878.40
LIABILITIES		
Debenture balance	29,987,512.34	27,962,685.51
Accounts payable	3,334,802.82	3,100,565.26
Bank overdraft	108,753.61	180,064.81
Other liabilities	3,120,619.84	2,998,174.20
Total liabilities	36,551,688.61	34,241,489.78
RESERVES		
For equity in H-E.P.C. systems	44,254,118.64	48,615,296.94
For depreciation	22,583,476.69	24,046,526.92
Other reserves	2,814,785.08	3,090,471.34
Total reserves	69,652,380.41	75,752,295.20
SURPLUS		
Debentures paid	30,890,189.93	32,866,660.82
Local sinking fund	10,397,958.20	11,032,594.44
Operating surplus	18,815,396.76	19,629,838.16
Total surplus	60,103,544.89	63,529,093.42
Total liabilities, reserves and surplus	166,307,613.91	173,522,878.40
Percentage of net debt to total assets	22.4	19.3

CONSOLIDATED OPERATING REPORT

YEAR	1912	1913	1914	1915
Number of municipalities included	28	45	69	99
EARNINGS	$ c.	$ c.	$ c.	$ c.
Domestic service	....	572,154.38	789,130.81	944,271.08
Commercial light service	....	525,438.16	673,803.92	720,209.26
Commercial power service	....	905,378.17	1,214,829.31	1,501,797.78
Municipal power	....	....	....	....
Street lighting	....	560,925.56	698,409.71	835,970.87
Rural service	....	....	....	....
Miscellaneous	....	53,543.24	57,482.41	68,046.29
Total earnings	1,617,674.00	2,617,439.51	3,433,656.16	4,070,295.28
EXPENSES				
Power purchased	....	789,632.87	1,045,752.65	1,484,666.00
Substation operation	....	78,394.81	97,658.90	107,607.31
Substation maintenance	....	18,698.46	31,790.99	25,935.56
Distribution system, operation and maintenance	....	104,114.51	130,998.65	154,409.71
Line transformer maintenance	....	8,547.61	11,764.32	11,508.92
Meter maintenance	....	5,222.19	9,536.07	12,899.14
Consumers' premises expenses	....	53,108.38	65,192.23	47,494.26
Street lignting, operation and maintenance	....	84,903.76	113,047.80	136,983.38
Promotion of business	....	72,303.51	86,683.02	74,402.55
Billing and collecting	....	77,351.76	103,560.71	131,541.27
General office, salaries and expenses	....	154,932.69	230,899.75	236,777.86
Undistributed expense	....	65,423.64	89,350.91	129,209.15
Interest	....	528,549.21	662,092.34	817,978.89
Sinking fund and principal payments on debentures	....	*	*	*
Total expenses	1,377,168.00	2,041,183.40	2,678,328.34	3,371,414 00
Surplus	240,506.00	576,256.11	755,327.82	698,881.28
Depreciation and other reserves	124,992.47	262,675.24	357,883.31	414,506.99
Surplus less depreciation	115,513.53	313,580.87	397,444.51	284,374.29

*Debenture payments included in "Interest."

CONSOLIDATED

YEAR	1916	1917	1918
Number of municipalities included	128	143	166
EARNINGS	$ c.	$ c.	$ c.
Domestic service	1,172,878.96	1,417,460.31	1,632,272.12
Commercial light service	812,130.78	899,023.72	968,399.42
Commercial power service	1,921,152.31	2,665,280.65	3,417,248.37
Municipal power	....	....	....
Street lighting	930,057.48	967,495.10	902,875.55
Rural service	....	....	....
Miscellaneous	147,381.50	120,805.39	161,243.70
Total earnings	4,983,601.03	6,070,065.17	7,082,039.16
EXPENSES			
Power purchased	1,959,446.83	2,573,879.37	2,807,769.33
Substation operation	153,761.08	203,091.20	238,257.34
Substation maintenance	46,131.53	42,129.04	60,805.92
Distribution system, operation and maintenance	154,247.17	169,326.24	223,347.81
Line transformer maintenance	14,528.17	25,328.95	30,488.83
Meter maintenance	24,218.48	44,461.55	63,155.56
Consumers' premises expenses	52,602.01	61,765.14	65,149.59
Street lighting, operation and maintenance	145,471.50	157,857.73	196,157.18
Promotion of business	79,324.85	73,516.37	64,962.78
Billing and collecting	154,508.58	188,083.84	208,660.76
General office, salaries and expenses	306,709.35	349,932.05	421,680.15
Undistributed expense	97,333.97	102,938.80	117,474.07
Interest	951,781.99	1,085,180.80	1,238,425.53
Sinking fund and principal payments on debentures	*	*	*
Total expenses	4,140,065.51	5,077,491.08	5,736,334.85
Surplus	843,535.52	992,574.09	1,345,704.31
Depreciation and other reserves	486,141.80	607,296.29	718,162.30
Surplus less depreciation	357,393.72	385,277.80	627,542.01

*Debenture payments included in "Interest."

OPERATING REPORT—Continued

1919	1920	1921	1922	1923	1924
181	186	205	214	224	241
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
1,991,632.31	2,546,345.30	3,149,080.03	3,786,608.23	5,166,452.24	5,993,231.07
1,175,143.56	1,512,854.63	1,851,501.76	2,158,306.34	3,260,772.50	3,566,227.22
3,443,107.13	3,752,188.22	3,895,437.46	4,383,912.97	5,927,666.37	6,222,865.88
....	532,279.09	654,531.01	973,263.38	1,161,598.60	1,352,966.47
988,900.95	1,005,535.11	1,060,357.77	1,160,446.81	1,269,604.48	1,356,668.97
....	168,919.95	145,566.57	105,877.09	116,639.06	75,100.24
228,270.65	189,778.63	225,467.70	187,689.39	316,311.21	231,663.58
7,827,054.60	9,707,900.93	10,981,942.30	12,756,104.21	17,219,044.46	18,798,723.43
3,284,490.68	4,216,667.87	4,876,650.31	6,636,853.37	8,699,026.67	9,669,789.40
217,638.89	285,407.35	314,838.35	315,443.70	474,442.13	430,056.09
81,853.63	102,050.81	104,798.01	100,763.67	133,815.53	202,050.04
286,310.76	344,551.57	487,918.33	519,252.16	636,477.41	648,700.62
42,509.12	46,323.09	65,088.46	52,932.26	75,920.10	82,936.50
78,726.64	123,701.18	116,722.97	107,806.88	139,104.81	141,231.23
84,301.24	116,283.52	134,854.92	143,388.88	218,682.02	237,316.20
215,963.86	236,930.79	297,481.52	297,363.86	299,579.08	269,973.30
74,789.22	78,294.85	101,804.46	129,932.63	184,371.00	202,060.74
236,504.75	295,942.88	321,685.71	338,153.50	444,306.92	490,273.30
452,131.22	559,695.29	656,268.11	605,852.50	937,463.47	889,907.66
190,690.09	256,400.33	308,874.42	385,895.03	359,206.91	494,078.50
1,285,571.51	1,431,807.16	998,611.47	1,074,657.44	1,615,205.16	1,779,991.26
*	*	532,183.96	635,469.90	990,907.14	1,122,798.87
6,531,481.61	8,094,056.69	9,317,781.00	11,343,765.78	15,208,508.35	16,661,163.71
1,295,572.99	1,613,844.24	1,664,161.30	1,412,338.43	2,010,536.11	2,137,559.72
814,219.37	902,028.75	1,044,434.85	715,814.24	916,782.75	973,649.62
481,353.62	711,815.49	619,726.45	696,524.19	1,093,753.36	1,163,910.10

CONSOLIDATED

YEAR	1925	1926	1927
Number of municipalities included	242	248	251
EARNINGS	$ c.	$ c.	$ c.
Domestic service	6,439,159.86	7,372,602.62	8,189,866.89
Commercial light service	3,866,292.79	4,187,899.19	4,626,815.51
Commercial power service	6,568,854.77	6,789,217.54	7,342,173.20
Municipal power	1,923,093.09	1,922,512.34	1,913,502.88
Street lighting	1,415,382.22	1,457,686.21	1,489,242.37
Rural service	37,975.18	37,810.73	13,765.72
Miscellaneous	286,451.08	471,134.15	581,913.04
Total earnings	20,537,208.99	22,238,862.78	24,157,279.61
EXPENSES			
Power purchased	11,063,123.34	12,185,669.10	13,505,583.77
Substation operation	417,921.71	450,416.84	430,211.76
Substation maintenance	207,497.63	286,520.37	275,148.86
Distribution system, operation and maintenance	686,344.54	795,514.70	758,747.10
Line transformer maintenance	75,473.28	74,876.11	94,706.38
Meter maintenance	156,909.55	189,603.70	214,813.87
Consumers' premises expenses	252,808.47	275,020.62	285,352.68
Street lighting, operation and maintenance	275,316.60	295,869.37	318,395.79
Promotion of business	217,102.24	234,696.74	220,687.60
Billing and collecting	521,134.01	557,271.54	605,627.58
General office, salaries and expenses	891,640.29	786,742.60	824,868.90
Undistributed expense	520,584.58	460,288.30	531,003.80
Truck operation and maintenance	....	....	....
Interest	1,889,810.95	1,985,233.73	2,063,698.00
Sinking fund and principal payments on debentures	1,294,027.29	1,347,511.92	1,505,626.31
Total expenses	18,469,694.48	19,925,235.64	21,634,472.40
Surplus	2,067,514.51	2,313,627.14	2,522,807.21
Depreciation and other reserves	1,068,880.42	1,146,273.05	1,249,711.65
Surplus less depreciation	998,634.09	1,167,354.09	1,273,095.56

OPERATING REPORT—Continued

1928	1929	1930	1931	1932
255	259	267	275	280
$ c.	$ c.	$ c.	$ c.	$ c.
8,925,050.56	9,873,681.57	10,542,903.89	10,972,952.10	11,447,307.85
5,182,723.32	5,697,766.06	5,961,383.23	6,230,475.89	6,243,794.01
8,298,669.44	9,376,158.74	9,340,653.28	9,456,224.97	9,356,693.88
1,921,300.97	2,086,444.24	2,111,482.38	1,967,118.54	1,859,585.35
1,534,476.98	1,598,262.43	1,674,528.03	1,746,855.24	1,783,972.46
48,451.90*	51,590.54*	28,954.60*	29,446.38*	11,069.27*
465,791.92	522,780.95	581,914.78	511,139.80	513,787.30
26,376,465.09	29,206,684.53	30,241,820.19	30,914,212.92	31,216,210.12
14,688,570.08	16,379,162.88	17,323,077.97	18,085,166.51	19,109,036.25
420,512.48	461,270.27	479,502.48	487,484.17	503,351.82
247,647.88	274,275.56	320,716.48	303,536.11	300,186.15
736,159.85	907,817.04	991,972.86	1,015,256.14	969,750.51
88,676.18	93,608.14	96,746.35	93,463.24	95,485.55
218,530.96	242,126.27	278,379.43	284,633.88	300,104.85
291,333.03	314,495.03	317,902.45	363,078.47	368,208.73
329,597.16	359,373.40	372,211.07	368,119.49	360,709.76
249,842.01	250,844.28	249,070.05	255,956.03	266,760.84
638,797.02	695,729.42	745,159.02	792,983.99	818,721.33
844,578.55	904,025.64	907,226.89	923,676.84	960,558.88
542,755.34	502,206.06	523,862.96	520,893.10	436,692.96
....	110,630.62	112,029.82	107,918.93	112,059.90
2,111,049.49	2,152,695.49	2,220,214.45	2,328,094.32	2,532,940.93
1,601,711.32	1,687,201.64	1,828,061.62	2,061,718.79	2,244,367.86
23,009,761.35	25,335,461.74	26,766,134.00	27,991,980.01	29,378,936.42
3,366,703.74	3,871,222.79	3,475,686.19	2,922,232.91	1,837,273.70
1,350,252.16	1,469,846.83	1,574,991.68	1,775,330.69	1,920,896.22
2,016,451.58	2,401,375.96	1,900,694.51	1.146,902.22	*83,622.52* (loss)

*Profits from the sale of merchandise. Rural service now given in Rural Power Districts.

CONSOLIDATED

YEAR	1933	1934	1935
Number of municipalities included	282	282	284
EARNINGS	$ c.	$ c.	$ c.
Domestic service	11,429,101.13	11,844,033.10	12,145,219.89
Commercial light service	6,013,025,96	6,206,086.35	6,458,748.57
Commercial power service	9,080,522.07	9,692,784.37	10,211,968.71
Municipal power	1,826,872.07	1,875,969.80	1,821,285.82
Street lighting	1,779,582.48	1,777,596.69	1,788,760.38
Merchandise*	12,812.74*	18,747.73*	21,669.98*
Miscellaneous	485,925.43	555,172.04	562,285.82
Total earnings	30,627,841.88	31,970,390.08	33,009,939.17
EXPENSES			
Power purchased	19,330,861.58	19,591,887.79	20,053,676.40
Substation operation	484,764.57	468,944.09	478,813.83
Substation maintenance	288,583.29	296,550.52	297,127.27
Distribution system, operation and maintenance	895,350.99	844,813.95	830,633.88
Line transformer maintenance	82,321.32	75,172.18	70,749.63
Meter maintenance	283,115.98	291,402.79	313,234.11
Consumers' premises expenses	361,499.20	352,499.09	340,761.52
Street lighting, operation and maintenance	353,082.15	338,784.80	340,120.36
Promotion of business	259,936.42	228,741.36	252,648.33
Billing and collecting	817,660.03	827,860.20	835,375.90
General office, salaries and expenses	908,517.79	908,039.75	943,880.18
Undistributed expense	349,101.36	362,322.12	360,676.96
Truck operation and maintenance	105,452.68	98,081.61	95,150.54
Interest	2,426,286.35	2,204,994.25	2,040,130.35
Sinking fund and principal payments on debentures	2,319,319.09	2,358,169.12	2,423,088.34
Total expenses	29,265,852.80	29,248,263.62	29,686,067.60
Surplus	1,361,989.08	2,722,126.46	3,323,871.57
Depreciation and other reserves	1,989,000.41	2,036,637.33	2,076,322.24
Surplus less depreciation	*627,011.33* (loss)	685,489.13	1,247,549.33

*Profits from the sale of merchandise. Rural service now given in Rural Power Districts.

OPERATING REPORT—Concluded

1936	1937	1938	1939
283	287	288	293
$ c.	$ c.	$ c.	$ c.
12,682,140.18	12,448,345.63	12,607,601.30	13,038,748.37
6,815,439.16	6,510,685.15	6,727,374.48	7,077,144.74
10,694,192.44	11,063,764.43	10,527,631.36	10,957,719.66
1,817,986.94	1,731,311.34	1,677,069.34	1,760,977.25
1,799,420.87	1,781,363.37	1,813,555.27	1,831,090.33
23,158.76*	22,971.02*	26,588.18*	28,874.86*
575,825.49	607,035.54	602,012.80	595,235.49
34,408,163.84	34,165,476.48	33,981,832.73	35,289,790.70
20,486,582.65	20,532,736.85	20,575,457.95	21,855,595.20
478,855.71	490,737.94	493,651.06	516,987.25
301,897.24	300,389.49	351,013.94	377,013.25
855,576.02	889,990.11	921,064.94	943,859.59
72,711.67	81,365.18	94,040.92	95,577.72
328,410.90	343,658.47	384,357.58	386,145.71
306,644.80	420,366.36	483,012.96	488,980.55
356,932.01	364,325.53	373,065.44	384,071.55
288,338.93	294,574.21	309,626.97	317,467.64
945,892.70	980,540.10	987,040.66	1,008,065.66
967,269.06	940,890.76	931,120.05	966,550.98
448,332.98	476,370.44	430,609.32	463,456.65
69,805.06	77,995.38	84,111.05	80,263.46
1,893,304.28	1,752,287.58	1,642,663.25	1,594,040.32
2,448,223.80	2,429,565.06	2,424,098.70	2,420,441.30
30,248,777.81	30,375,793.46	30,484,934.79	31,898,516.83
4,159,386.03	3,789,683.02	3,496,897.94	3,391,273.87
2,230,021.86	2,329,625.64	2,451,529.46	2,524,364.33
1,929,364.17	1,460,057.38	1,045,368.48	866,909.54

STATEMENT

Balance Sheets of Electrical Departments of

NIAGARA
SYSTEM

Municipality Population	Acton 1,869	Agincourt P.V.	Ailsa Craig 483	Alvinston 650	Amherstburg 2,857
ASSETS	$ c.	$ c.	$ c.	$ c.	$ c.
Lands and buildings	1,545.45	....	....	133.56	....
Substation equipment	1,962.78	....	....	....	932.00
Distribution system—overhead	26,001.97	8,931.61	7,738.40	14,213.04	39,240.18
Distribution system—underground	....	....	....	....	....
Line transformers	12,770.73	4,881.46	1,761.29	3,150.23	19,512.98
Meters	11,183.47	2,899.87	2,598.34	3,220.56	16,975.68
Street light equipment, regular	2,287.14	916.31	457.58	1,090.62	1,579.90
Street light equipment, ornamental	....	....	....	....	5,598.72
Miscellaneous construction expense	2,822.24	34.95	492.36	1,063.61	5,730.09
Steam or hydraulic plant	....	....	....	....	....
Old plant	....	....	....	773.85	....
Total plant	58,573.78	17,664.20	13,047.97	23,645.47	89,569.55
Bank and cash balance	4,969.87	469.45	6,529.93	1,819.09	2,532.70
Securities and investments	6,500.00	5,000.00	5,000.00	4,500.00	....
Accounts receivable	1,279.28	1,110.22	1,316.21	1,750.64	11,690.59
Inventories	1,421.26	....	....	....	217.58
Sinking fund on local debentures	....	....	....	....	....
Equity in H-E.P.C. systems	65,467.80	10,600.51	14,896.60	14,905.50	51,234.95
Other assets	....	171.15	....	....	307.20
Total assets	138,211.99	35,015.53	40,790.71	46,620.70	155,552.57
Deficit	....	....	....	679.18	....
Total	138,211.99	35,015.53	40,790.71	47,299.88	155,552.57
LIABILITIES					
Debenture balance	....	....	....	1,687.93	12,681.91
Accounts payable	....	309.05	301.28	....	811.26
Bank overdraft	....	....	....	....	....
Other liabilities	975.61	....	150.00	49.00	7,701.16
Total liabilities	975.61	309.05	451.28	1,736.93	21,194.33
RESERVES					
For equity in H-E.P.C. systems	65,467.80	10,600.51	14,896.60	14,905.50	51,234.95
For depreciation	11,034.53	2,447.94	7,146.52	8,741.14	24,333.75
Other reserves	....	60.05	....	75.00	501.11
Total reserves	76,502.33	13,108.50	22,043.12	23,721.64	76,069.81
SURPLUS					
Debentures paid	14,500.00	8,072.65	6,883.38	21,841.31	19,371.69
Local sinking fund	....	....	....	....	....
Operating surplus	46,234.05	13,525.33	11,412.93	....	38,916.74
Total surplus	60,734.05	21,597.98	18,296.31	21,841.31	58,288.43
Total liabilities, reserves and surplus	138,211.99	35,015.53	40,790.71	47,299.88	155,552.57
Percentage of net debt to total assets	1.3	1.3	1.7	5.5	15.8

NOTE—In computing the "percentage of net debt to total assets," the ornamental street lighting capital, sinking fund on local debentures, and equity in H-E.P.C. systems, are excluded

"A"

Hydro Municipalities as at December 31, 1939

Ancaster Twp.	Arkona 397	Aylmer 2,156	Ayr 730	Baden P.V.	Beachville P.V.	Beamsville 1,161
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
....	....	10,383.52	125.00	660.64	176.13	....
....	....	....	....	....	....	600.00
19,027.97	9,846.17	23,083.73	12,625.70	9,177.31	14,106.51	27,399.11
....	....	....	....	....	....	....
12,321.54	2,097.73	13,226.91	5,254.56	6,612.00	3,850.15	11,646.50
5,593.62	1,711.72	11,678.39	4,135.20	3,684.72	3,472.60	6,914.43
1,376.27	750.31	2,033.42	610.17	738.66	444.23	2,183.16
....	....	....	....	....	....	....
885.61	208.57	2,088.71	870.99	335.02	602.04	314.85
....	....	....	....	....	....	....
....	1,030.30	6,719.17	4,002.53	....	....	....
39,205.01	15,644.80	69,213.85	27,624.15	21,208.35	22,651.66	49,058.05
1,115.01	164.36	2,812.81	117.76	2,896.32	4,618.62	9,584.97
....	....	12,000.00	1,000.00	....	4,000.00	....
1,378.14	414.69	2,023.49	1,620.09	330.10	445.70	1,089.67
....	....	....	....	....	....	....
....	....	....	....	....	....	....
16,231.08	5,902.71	40,941.12	14,292.87	30,955.70	39,429.86	3,080.31
....	....	....	....	....	....	....
57,929.24	22,126.56	126,991.27	44,654.87	55,390.47	71,145.84	62,813.00
....	764.47	....	....	....	....	....
57,929.24	22,891.03	126,991.27	44,654.87	55,390.47	71,145.84	62,813.00
9,089.85	5,643.30	10,838.80	4,456.61	604.79	691.70	34,930.99
1,288.33	542.97	160.54	.70	.08	17.49	324.00
....	....	....	....	....	....	....
212.42	....	515.00	6.00	....	....	552.09
10,590.60	6,186.27	11,514.34	4,463.31	604.87	709.19	35,807.08
16,231.08	5,902.71	40,941.12	14,292.87	30,955.70	39,429.86	3,080.31
9,504.80	3,332.52	16,052.11	6,341.00	2,978.43	8,704.19	12,214.16
112.36	....	654.83	517.29	....	....	2,199.76
25,848.24	9,235.23	57,648.06	21,151.16	33,934.13	48,134.05	17,494.23
5,020.43	7,469.53	27,863.12	13,046.77	4,395.21	4,661.30	2,569.01
16,469.97	....	29,965.75	5,993.63	16,456.26	17,641.30	6,942.68
21,490.40	7,469.53	57,828.87	19,040.40	20,851.47	22,302.60	9,511.69
57,929.24	22,891.03	126,991.27	44,654.87	55,390.47	71,145.84	62,813.00
25.4	38.1	13.4	14.7	2.5	2.2	59.9

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from assets; and the total liabilities are reduced by the amount of the local sinking fund reserve, and the liability in respect to the ornamental street lighting capital, which amount is included in other liabilities.

STATEMENT

Balance Sheets of Electrical Departments of

NIAGARA
SYSTEM—Continued

Municipality	Belle River	Blenheim	Blyth	Bolton	Bothwell
Population	814	1,758	656	600	694
Assets	$ c.	$ c.	$ c.	$ c.	$ c.
Lands and buildings	....	12,940.28	....	....	....
Substation equipment	....	909.64	....	....	....
Distribution system—overhead	19,179.99	30,437.59	11,753.43	10,105.05	7,490.65
Distribution system—underground	....	....	....	....	....
Line transformers	4,445.86	9,649.62	2,449.70	4,688.27	2,722.33
Meters	4,343.42	10,260.33	2,315.67	3,352.70	3,292.83
Street light equipment, regular	1,102.88	3,843.85	1,569.43	873.89	3,571.49
Street light equipment, ornamental	....	1,482.97	....	....	1,131.22
Miscellaneous construction expense	1,112.91	977.52	258.93	1,404.89	496.64
Steam or hydraulic plant	....	....	....	....	....
Old plant	....	....	2,096.17	1,554.60	....
Total plant	30,185.06	70,501.80	20,443.33	21,979.40	18,705.16
Bank and cash balance	3,908.75	25.00	1,259.23	1,671.85	105.65
Securities and investments	....	....	3,000.00	5,000.00	11,000.00
Accounts receivable	476.22	3,534.21	1,228.63	1,402.12	1,090.45
Inventories	....	2,033.12	....	....	31.50
Sinking fund on local debentures	....	....	....	....	....
Equity in H-E.P.C. systems	9,895.94	36,230.56	9,317.39	16,916.56	16,889.33
Other assets	....	....	....	....	....
Total assets	44,465.97	112,324.69	35,248.58	46,969.93	47,822.09
Deficit	....	....	....	....	....
Total	44,465.97	112,324.69	35,248.58	46,969.93	47,822.09
Liabilities					
Debenture balance	....	5,001.55	2,368.33	2,675.76	1,786.20
Accounts payable	359.96	5,490.81	706.06	7.10	....
Bank overdraft	....	1,448.10	....	....	....
Other liabilities	195.00	1,783.47	130.00	....	1,186.22
Total liabilities	554.96	13,723.93	3,204.39	2,682.86	2,972.42
Reserves					
For equity in H-E.P.C. systems	9,895.94	36,230.56	9,317.39	16,916.56	16,889.33
For depreciation	8,815.97	18,398.11	5,241.05	8,114.81	6,923.44
Other reserves	....	212.18	....	....	25.02
Total reserves	18,711.91	54,840.85	14,558.44	25,031.37	23,837.79
Surplus					
Debentures paid	8,500.00	8,998.45	13,664.19	9,824.24	3,747.99
Local sinking fund	....	....	....	....	....
Operating surplus	16,699.10	34,761.46	3,821.56	9,431.46	17,263.89
Total surplus	25,199.10	43,759.91	17,485.75	19,255.70	21,011.88
Total liabilities, reserves and surplus	44,465.97	112,324.69	35,248.58	46,969.93	47,822.09
Percentage of net debt to total assets	1.6	16.4	12.4	8.9	9.6

"A"—Continued

Hydro Municipalities as at December 31, 1939

Brampton 5,695	Brantford 31,369	Brantford Twp.	Bridgeport P.V.	Brigden P.V.	Brussels 773	Burford P.V.
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
5,355.12	110,793.14	....	....	101.03	....	202.00
34,176.39	257,198.80	1,192.71	....	....	....	....
54,007.73	279,675.67	63,285.61	10,077.80	7,343.46	13,794.49	9,389.43
....	....	....	....	....	....	....
36,012.76	167,355.96	19,700.05	3,275.45	2,068.13	2,402.70	3,389.12
30,045.58	145,266.24	14,985.54	2,732.13	2,428.51	4,162.26	3,781.53
12,434.99	24,820.26	5,241.85	1,635.60	494.23	1,587.79	425.14
....	38,922.18	....	....	....	....	....
19,165.59	33,563.78	2,839.08	615.56	1,341.57	1,541.03	746.65
....	....	....	....	....	....	....
....	6,000.00	....	....	1,381.00	2,827.50	....
191,198.16	1,063,596.03	107,244.84	18,336.54	15,157.93	26,315.77	17,933.87
50.00	603.35	7,031.35	876.24	1,810.60	2,953.70	3,418.75
2,930.69	81,500.00	....	....	2,500.00	7,000.00	3,000.00
5,364.02	27,313.09	491.10	476.23	873.59	833.27	952.75
125.40	11,338.59	....	....	....	....	....
....	....	....	....	....	....	....
164,683.18	865,674.25	32,262.12	5,968.36	11,489.72	12,547.52	13,150.48
....	....	....	....	....	....	....
364,351.45	2,050,025.31	147,029.41	25,657.37	31,831.84	49,650.26	38,455.85
....	....	....	....	....	....	....
364,351.45	2,050,025.31	147,029.41	25,657.37	31,831.84	49,650.26	38,455.85
....	68,500.00	....	7,779.37	....	6,159.29	....
13,548.36	5,243.87	806.82	9.72	11.53	....	41.10
3,828.34	....	....	....	....	....	....
345.00	58,647.27	1,898.65	184.73	30.00	42.73	63.08
17,721.70	132,391.14	2,705.47	7,973.82	41.53	6,202.02	104.18
164,683.18	865,674.25	32,262.12	5,968.36	11,489.72	12,547.52	13,150.48
59,563.96	377,715.66	28,666.30	5,887.49	5,411.40	7,764.30	6,272.79
198.32	23,272.24	117.04	....	97.24	....	407.55
224,445.46	1,266,662.15	61,045.46	11,855.85	16,998.36	20,311.82	19,830.82
69,050.64	461,500.00	57,125.66	4,588.66	8,000.00	14,840.71	9,000.00
....	....	....	....	....	....	....
53,133.65	189,472.02	26,152.82	1,239.04	6,791.95	8,295.71	9,520.85
122,184.29	650,972.02	83,278.48	5,827.70	14,791.95	23,136.42	18,520.85
364,351.45	2,050,025.31	147,029.41	25,657.37	31,831.84	49,650.26	38,455.85
8.9	8.3	2.4	40.5	0.2	16.7	0.4

STATEMENT

Balance Sheets of Electrical Departments of

NIAGARA SYSTEM—Continued

Municipality Population	Burgess-ville P.V.	Caledonia 1,425	Campbell-ville P.V.	Cayuga 682	Chatham 16,517
ASSETS	$ c.	$ c.	$ c.	$ c.	$ c.
Lands and buildings	....	202.72	....	....	90,216.28
Substation equipment	....	....	....	....	154,326.67
Distribution system—overhead	3,674.57	18,965.82	3,002.37	18,920.53	149,314.96
Distribution system—underground	....	....	....	....	86,297.88
Line transformers	1,395.24	6,844.87	820.55	5,247.41	90,595.91
Meters	1,161.12	7,700.81	702.66	4,043.48	73,288.68
Street light equipment, regular	261.02	1,954.21	335.61	1,208.59	18,877.79
Street light equipment, ornamental	....	....	....	....	35,426.10
Miscellaneous construction expense	457.22	1,579.03	14.62	603.26	32,555.83
Steam or hydraulic plant	....	....	....	....	....
Old plant	....	....	....	....	42,752.31
Total plant	6,949.17	37,247.46	4,875.81	30,023.27	773,652.41
Bank and cash balance	533.29	2,907.86	602.72	241.78	50.00
Securities and investments	....	2,000.00	1,500.00	2,500.00	20,000.00
Accounts receivable	333.22	321.54	775.20	1,115.46	41,695.65
Inventories	....	657.77	....	396.27	7,590.53
Sinking fund on local debentures	....	....	....	....	....
Equity in H-E.P.C. systems	5,155.99	21,747.21	2,442.26	9,222.09	380,750.24
Other assets	....	....	....	....	....
Total assets	12,971.67	64,881.84	10,195.99	43,498.87	1,223,738.83
Deficit	....	....	....	....	....
Total	12,971.67	64,881.84	10,195.99	43,498.87	1,223,738.83
LIABILITIES					
Debenture balance	....	....	1,691.68	7,146.70	145,762.49
Accounts payable	....	258.78	....	3,683.95	15,335.55
Bank overdraft	....	....	....	....	5,335.75
Other liabilities	....	53.50	....	145.00	43,457.95
Total liabilities	....	312.28	1,691.68	10,975.65	209,891.74
RESERVES					
For equity in H-E.P.C. systems	5,155.99	21,747.21	2,442.26	9,222.09	380,750.24
For depreciation	3,251.14	3,325.60	1,276.21	5,755.47	174,792.35
Other reserves	....	....	....	66.21	21,238.41
Total reserves	8,407.13	25,072.81	3,718.47	15,043.77	576,781.00
SURPLUS					
Debentures paid	3,500.00	4,624.00	3,756.09	12,853.30	224,237.51
Local sinking fund	....	....	....	....	....
Operating surplus	1,064.54	34,872.75	1,029.75	4,626.15	212,828.58
Total surplus	4,564.54	39,496.75	4,785.84	17,479.45	437,066.09
Total liabilities, reserves and surplus	12,971.67	64,881.84	10,195.99	43,498.87	1,223,738.83
Percentage of net debt to total assets	0.0	0.7	21.8	32.0	21.6

"A"—Continued

Hydro Municipalities as at December 31, 1939

Chippawa 1,140	Clifford 452	Clinton 1,888	Comber P.V.	Cottam P.V.	Courtright 329	Dashwood P.V.
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
1,434.46	....	8,830.52	62.00	50.00	....	....
....	....	7,598.09	....	....	....	....
11,814.07	8,132.69	25,848.06	7,861.74	9,561.43	6,558.19	3,549.68
....	....	....	....	....	....	....
6,520.74	1,429.64	10,449.33	4,012.64	2,133.74	1,225.40	2,400.81
5,690.68	2,415.98	10,404.01	2,614.84	1,932.89	945.92	1,681.19
3,139.20	845.05	5,605.10	423.35	366.43	425.08	364.52
....	....	....	....	....	....	....
1,614.64	37.44	5,509.39	1,200.09	254.31	633.46	318.85
....	....	....	....	....	....	....
....	....	10,658.09	....	....	....	....
30,213.79	12,860.80	84,902.59	16,174.66	14,298.80	9,788.05	8,315.05
2,916.15	2,675.53	2,137.25	585.81	377.75	3,555.09	1,706.65
....	....	3,000.00	6,000.00	5,516.79	....	1,500.00
1,287.49	661.81	3,409.96	69.17	501.17	648.19	651.99
....	....	2,838.49	....	....	....	....
....	....	7,038.38	....	....	....	....
16,607.60	6,717.41	44,939.51	18,086.32	4,120.58	5,472.89	8,133.41
....	....	....	....	....	....	....
51,025.03	22,915.55	148,266.18	40,915.96	24,815.09	19,464.22	20,307.10
....	....	....	....	....	....	....
51,025.03	22,915.55	148,266.18	40,915.96	24,815.09	19,464.22	20,307.10
796.22	5,525.12	7,500.00	217.96	4,279.99	....	1,329.52
4.40	.53	93.62	1,123.30	55.29	137.94	....
....	....	....	....	....	....	....
678.00	....	376.72	30.00	205.00	....	....
1,478.62	5,525.65	7,970.34	1,371.26	4,540.28	137.94	1,329.52
16,607.60	6,717.41	44,939.51	18,086.32	4,120.58	5,472.89	8,133.41
4,442.83	3,028.17	25,557.46	6,487.12	4,681.48	2,092.40	3,165.30
....	....	558.26	....	....	14.21	....
21,050.43	9,745.58	71,055.23	24,573.44	8,802.06	7,579.50	11,298.71
12,553.78	2,474.88	37,000.00	7,482.04	4,720.23	8,138.35	2,070.48
....	....	7,038.38	....	....	....	....
15,942.20	5,169.44	25,202.23	7,489.22	6,752.52	3,608.43	5,608.39
28,495.98	7,644.32	69,240.61	14,971.26	11,472.75	11,746.78	7,678.87
51,025.03	22,915.55	148,266.18	40,915.96	24,815.09	19,464.22	20,307.10
4.3	34.1	0.9	6.0	18.3	1.0	10.9

STATEMENT

Balance Sheets of Electrical Departments of

NIAGARA SYSTEM—Continued

Municipality	Delaware	Delhi	Dorchester	Drayton	Dresden
Population	P.V.	2,083	P.V.	527	1,572
ASSETS	$ c.	$ c.	$ c.	$ c.	$ c.
Lands and buildings					
Substation equipment					523.00
Distribution system—overhead	5,132.69	26,126.71	9,314.91	9,838.74	19,719.73
Distribution system—underground					
Line transformers	1,658.08	15,193.00	3,046.56	4,143.43	8,462.31
Meters	1,307.34	11,421.92	2,721.48	3,510.04	7,105.23
Street light equipment, regular	202.58	3,364.32	783.17	772.21	1,127.48
Street light equipment, ornamental					
Miscellaneous construction expense	203.81	3,613.31	328.41	430.47	1,328.40
Steam or hydraulic plant					
Old plant		28,836.13			4,815.01
Total plant	8,504.50	88,555.39	16,194.53	18,694.89	43,081.16
Bank and cash balance	300.45	987.66	570.13	121.19	694.59
Securities and investments	1,000.00		2,000.00	5,000.00	4,000.00
Accounts receivable	963.63	4,397.21	1,267.49	1,659.61	2,448.26
Inventories		2,680.51			1,327.05
Sinking fund on local debentures					
Equity in H-E.P.C. systems	3,086.15	2,180.26	7,272.88	12,044.24	30,637.35
Other assets	106.03				333.44
Total assets	13,960.76	98,801.03	27,305.03	37,519.93	82,521.85
Deficit					
Total	13,960.76	98,801.03	27,305.03	37,519.93	82,521.85
LIABILITIES					
Debenture balance	1,127.10	53,153.00	1,419.47	4,290.78	
Accounts payable	230.04	24,946.87	15	698.52	97.94
Bank overdraft					
Other liabilities		1,415.00	22.00		295.00
Total liabilities	1,357.14	79,514.87	1,441.62	4,989.30	392.94
RESERVES					
For equity in H-E.P.C. systems	3,086.15	2,180.26	7,272.88	12,044.24	30,637.35
For depreciation	515.26	6,195.48	3,489.65	7,963.26	5,913.90
Other reserves	30.00		46.17		1,666.28
Total reserves	3,631.41	8,375.74	10,808.70	20,007.50	38,217.53
SURPLUS					
Debentures paid	2,872.90	1,847.00	2,880.53	5,209.22	16,238.25
Local sinking fund					
Operating surplus	6,099.31	9,063.42	12,174.18	7,313.91	27,673.13
Total surplus	8,972.21	10,910.42	15,054.71	12,523.13	43,911.38
Total liabilities, reserves and surplus	13,960.76	98,801.03	27,305.03	37,519.93	82,521.85
Percentage of net debt to total assets	12.5	82.3	7.2	19.6	0.7

"A"—Continued

Hydro Municipalities as at December 31, 1939

Drumbo P.V.	Dublin P.V.	Dundas 4,839	Dunnville 3,928	Dutton 793	East York Twp.	Elmira 2,074
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
....	....	12,701.65	3,356.09	75.11	17,018.18	7,458.03
....	....	13,396.22	30,684.07	....	8,893.55	....
4,698.32	5,902.30	51,211.70	40,014.43	10,036.85	317,981.38	35,114.49
....	....	....	....	....	....	540.21
1,801.50	1,354.25	22,319.68	21,742.96	3,791.29	94,744.36	15,281.57
1,999.16	1,109.68	22,585.67	19,531.55	3,513.02	150,522.85	13,542.89
284.27	544.86	11,535.93	9,543.11	764.76	24,282.27	2,132.39
....	....	1,154.52	....	....	....	....
235.58	819.44	7,216.55	7,501.54	319.53	17,844.81	2,590.95
....	....	....	....	....	....	....
....	....	1,867.38	10,717.62	....	....	2,168.08
9,018.83	9,730.53	143,989.30	143,091.37	18,500.56	631,287.40	78,828.61
6,120.20	1,258.43	23,768.81	11,073.81	....	22,989.04	4,531.98
....	....	1,500.00	5,000.00	7,000.00	2,812.91	11,000.00
216.15	427.65	6,846.23	5,623.31	612.70	4,950.58	1,968.37
....	....	327.43	1,876.19	14.85	8,393.39	....
....	....	....	....	....	....	....
6,305.13	5,493.44	134,604.08	59,435.52	18,995.85	258,357.58	74,523.87
....	....	212.08	....	....	73.40	....
21,660.31	16,910.05	311,247.93	226,100.20	45,123.96	928,864.30	170,852.83
....	....	....	....	....	....	....
21,660.31	16,910.05	311,247.93	226,100.20	45,123.96	928,864.30	170,852.83
1,267.36	....	10,827.41	31,652.39	....	159,084.48	13,120.85
80.05	....	1,173.27	111.25	501.35	37,477.65	....
....	....	....	....	10.75	....	....
....	6.00	7,518.30	1,841.61	187.36	17,471.89	685.65
1,347.41	6.00	19,518.98	33,605.25	699.46	214,034.02	13,806.50
6,305.13	5,493.44	134,604.08	59,435.52	18,995.85	258,357.58	74,523.87
4,809.76	4,708.81	61,853.56	38,796.53	8,765.11	100,371.38	26,413.16
....	....	344.84	....	34.22	2,138.00	....
11,114.89	10,202.25	196,802.48	98,232.05	27,795.18	360,866.96	100,937.03
3,232.64	6,200.00	42,172.59	43,847.61	8,407.49	197,983.30	24,047.65
....	....	....	....	....	....	....
5,965.37	501.80	52,753.88	50,415.29	8,221.83	155,980.02	32,061.65
9,198.01	6,701.80	94,926.47	94,262.90	16,629.32	353,963.32	56,109.30
21,660.31	16,910.05	311,247.93	226,100.20	45,123.96	928,864.30	170,852.83
8.8	0.0	10.4	20.2	2.1	31.9	14.3

STATEMENT

Balance Sheets of Electrical Departments of

NIAGARA SYSTEM—Continued

Municipality	Elora	Embro	Erieau	Erie Beach	Essex
Population	1,149	423	295	28	1,854
ASSETS	$ c.	$ c.	$ c.	$ c.	$ c.
Lands and buildings	1,524.54				
Substation equipment					
Distribution system—overhead	17,918.38	10,409.76	11,134.43	2,480.84	38,453.46
Distribution system—underground					442.55
Line transformers	7,708.74	4,161.59	2,495.04	925.32	17,365.02
Meters	6,475.25	2,333.10	3,189.71	900.39	12,103.81
Street light equipment, regular	1,258.49	535.73	341.06		1,605.38
Street light equipment, ornamental					7,205.06
Miscellaneous construction expense	1,343.75	69.45	379.90	375.03	2,102.35
Steam or hydraulic plant					
Old plant		429.25			
Total plant	36,229.15	17,938.88	17,540.14	4,681.58	79,277.63
Bank and cash balance	720.77	439.12		1,216.16	4,680.76
Securities and investments	7,000.00	1,000.00			15,000.00
Accounts receivable	1,411.06	775.31	952.31	246.33	2,104.61
Inventories	296.47				
Sinking fund on local debentures					
Equity in H-E.P.C. systems	35,800.44	10,876.81	6,094.18	1,540.01	29,651.16
Other assets	122.25				
Total assets	81,580.14	31,030.12	24,586.63	7,684.08	130,714.16
Deficit					
Total	81,580.14	31,030.12	24,586.63	7,684.08	130,714.16
LIABILITIES					
Debenture balance			2,137.44	1,606.39	15,539.39
Accounts payable	14	29	275.24	45.47	131.03
Bank overdraft			168.91		
Other liabilities	116.25		30.00		7,831.89
Total liabilities	116.39	29	2,611.59	1,651.86	23,502.31
RESERVES					
For equity in H-E.P.C. systems	35,800.44	10,876.81	6,094.18	1,540.01	29,651.16
For depreciation	16,512.36	5,402.09	4,022.32	699.31	21,497.50
Other reserves		43.89	73.02		497.78
Total reserves	52,312.80	16,322.79	10,189.52	2,239.32	51,646.44
SURPLUS					
Debentures paid	13,000.00	7,500.00	4,745.69	1,693.61	6,960.61
Local sinking fund					
Operating surplus	16,150.95	7,207.04	7,039.83	2,099.29	48,604.80
Total surplus	29,150.95	14,707.04	11,785.52	3,792.90	55,565.41
Total liabilities, reserves and surplus	81,580.14	31,030.12	24,586.63	7,684.08	130,714.16
Percentage of net debt to total assets	0.3	0.0	14.1	26.9	17.4

"A"—Continued

Hydro Municipalities as at December 31, 1939

Etobicoke Twp.	Exeter 1,649	Fergus 2,792	Fonthill 867	Forest 1,520	Forest Hill 11,117	Galt 14,219
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
34,096.10	3,335.73	....	....	6,481.52	8,379.87	201,703.95
....	....	....	....	....	69,774.97	122,888.16
307,676.55	31,856.74	35,342.70	12,092.53	23,168.74	175,316.40	269,668.32
....	....	....	....	....	1,209.22	....
95,626.79	11,895.95	20,667.45	5,367.52	10,890.14	98,639.64	117,573.98
69,725.60	8,862.08	13,709.82	4,906.39	10,919.06	58,536.50	75,628.35
14,920.13	4,693.43	2,588.89	1,709.32	2,615.57	8,075.72	72,085.68
2,689.44	....	3,537.86	....	....	....	....
18,239.66	2,870.89	892.33	216.90	2,207.67	18,931.15	26,058.93
....	....	....	....	....	....	....
....	....	2,546.59	3,500.00	11,042.87	....	....
542,974.27	63,514.82	79,285.64	27,792.66	67,325.57	438,863.47	885,607.37
....	1,296.79	10.00	2,021.21	1,384.88	35.00	413.04
....	11,000.00	....	....	12,500.00	....	68,000.00
11,779.15	3,556.26	11,457.22	748.46	4,362.65	16,740.90	45,697.60
5,403.00	1,941.29	118.87	....	2,271.21	....	26,918.08
....	....	....	....	....	....	73,282.99
202,578.94	40,104.49	58,949.59	5,919.26	31,461.66	150,256.56	521,404.95
....	....	87.27	....	....	....	619.78
762,735.36	121,413.65	149,908.59	36,481.59	119,305.97	605,895.93	1,621,943.81
....	....	....	....	....	....	....
762,735.36	121,413.65	149,908.59	36,481.59	119,305.97	605,895.93	1,621,943.81
106,754.37	1,351.48	10,924.59	9,510.93	4,823.46	273,038.99	139,764.70
31,366.15	....	8,227.12	187.56	322.89	2,993.43	25,224.01
11,685.69	....	1,065.89	....	....	12,669.13	19,198.89
9,679.01	176.50	3,732.47	344.30	76.24	8,512.73	2,198.86
159,485.22	1,527.98	23,950.07	10,042.79	5,222.59	297,214.28	186,386.46
202,578.94	40,104.49	58,949.59	5,919.26	31,461.66	150,256.56	521,404.95
112,730.13	17,014.43	12,273.06	3,114.63	18,149.91	89,836.82	318,155.96
848.91	540.71	3,929.92	....	122.70	550.00	28,455.29
316,157.98	57,659.63	75,152.57	9,033.89	49,734.27	240,643.38	868,016.20
158,941.03	18,648.57	31,075.41	12,989.07	29,576.54	50,272.61	378,237.25
....	....	....	....	....	....	73,282.99
128,151.13	43,577.47	19,730.54	4,415.84	34,772.57	17,765.66	116,020.91
287,092.16	62,226.04	50,805.95	17,404.91	64,349.11	68,038.27	567,541.15
762,735.36	121,413.65	149,908.59	36,481.59	119,305.97	605,895.93	1,621,943.81
28.1	1.9	27.4	32.9	6.0	65.2	11.0

STATEMENT

Balance Sheets of Electrical Departments of

NIAGARA SYSTEM—Continued

Municipality	Georgetown	Glencoe	Goderich	Granton	Guelph
Population	2,345	726	4,407	P.V.	21,514
ASSETS					
Lands and buildings	673.81	3,230.35	13,569.89		13,380.18
Substation equipment			34,402.48		174,824.81
Distribution system—overhead	34,920.70	21,527.94	71,269.69	4,403.03	252,585.68
Distribution system—underground					
Line transformers	22,419.62	7,373.10	21,546.17	1,696.30	108,075.86
Meters	14,964.82	4,547.12	20,990.38	1,610.02	103,785.43
Street light equipment, regular	4,570.34	1,735.09	9,152.70	180.78	44,220.15
Street light equipment, ornamental					
Miscellaneous construction expense	2,569.99	3,548.15	6,274.00	113.08	18,263.38
Steam or hydraulic plant					
Old plant	2,209.80		14,622.15		
Total plant	82,329.08	41,961.75	191,827.46	8,003.21	715,135.49
Bank and cash balance	2,905.76	7,022.88	19,006.66	608.95	13,436.98
Securities and investments	6,300.56		16,500.00	4,000.00	
Accounts receivable	5,032.64	1,820.23	6,978.76	622.04	9,491.12
Inventories		525.92	1,648.33		21,119.63
Sinking fund on local debentures					
Equity in H-E.P.C. systems	98,529.52	19,511.71	118,214.96	7,812.55	636,533.95
Other assets			166.70		
Total assets	195,097.56	70,842.49	354,342.87	21,046.75	1,395,717.17
Deficit					
Total	195,097.56	70,842.49	354,342.87	21,046.75	1,395,717.17
LIABILITIES					
Debenture balance	5,034.70	1,427.70	34,063.46	1,250.74	
Accounts payable	38.26	55	5,684.58	214.86	20,958.42
Bank overdraft					
Other liabilities	1,255.06	135.50	2,621.88		2,442.95
Total liabilities	6,328.02	1,563.75	42,369.92	1,465.60	23,401.37
RESERVES					
For equity in H-E.P.C. systems	98,529.52	19,511.71	118,214.96	7,812.55	636,533.95
For depreciation	20,366.88	12,598.48	87,369.71	3,516.35	153,357.06
Other reserves		378.82	885.08	60.00	1,791.12
Total reserves	118,896.40	32,489.01	206,469.75	11,388.90	791,682.13
SURPLUS					
Debentures paid	14,965.30	18,685.18	62,024.59	2,249.26	145,000.00
Local sinking fund					
Operating surplus	54,907.84	18,104.55	43,478.61	5,942.99	435,633.67
Total surplus	69,873.14	36,789.73	105,503.20	8,192.25	580,633.67
Total liabilities, reserves and surplus	195,097.56	70,842.49	354,342.87	21,046.75	1,395,717.17
Percentage of net debt to total assets	6.6	3.0	17.9	11.0	3.1

"A"—Continued

Hydro Municipalities as at December 31, 1939

Hagersville	Hamilton	Harriston	Harrow	Hensall	Hespeler	Highgate
1,355	154,751	1,269	1,032	685	2,789	362
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
....	961,543.54	395.25	2,295.35	....	4,684.43	....
864.37	2,042,947.45	600.00	....	....	39,867.91	....
21,154.03	1,246,479.37	22,539.64	18,586.78	12,589.16	31,928.66	6,470.98
....	843,801.34	....	....	....	....	....
11,263.05	873,376.19	8,517.01	10,582.81	5,413.17	23,681.56	2,109.25
9,191.32	746,966.08	8,759.84	7,347.00	3,842.66	13,161.09	1,801.55
1,053.17	284,627.32	1,332.00	902.85	612.83	8,118.26	453.91
....	....	....	....	....	....	....
590.60	102,935.69	1,107.52	1,136.80	711.34	1,540.44	491.60
....	....	....	....	....	....	....
....	2,842.66	1,001.43	....	400.00	....	....
44,116.54	7,105,519.64	44,252.69	40,851.59	23,569.16	122,982.35	11,327.29
7,405.90	100,617.02	1,789.03	1,099.72	1,329.34	15,216.59	2,100.90
16,000.00	....	3,500.00	....	7,000.00	....	3,000.00
268.26	331,922.82	1,875.67	1,898.77	1,445.24	1,612.17	463.55
....	149,201.79	137.65	508.56	....	337.74	....
....	486,660.15	....	....	....	....	....
73,610.35	4,491,922.55	32,455.04	23,462.77	15,724.36	108,385.58	9,379.45
....	86,334.14	197.27	....	....	....	....
141,401.05	12,752,178.11	84,207.35	67,821.41	49,068.10	248,534.43	26,271.19
....	....	....	....	....	....	....
141,401.05	12,752,178.11	84,207.35	67,821.41	49,068.10	248,534.43	26,271.19
1,384.01	1,954,000.00	5,744.10	1,610.72	3,909.35	21,945.56	....
96.47	370,251.03	.31	568.94	697.00	304.31	9.92
....	....	....	....	....	....	....
370.00	*843,015.65	30.00	479.26	48.00	30.00	60.00
1,850.48	3,167,266.68	5,774.41	2,658.92	4,654.35	22,279.87	69.92
73,610.35	4,491,922.55	32,455.04	23,462.77	15,724.36	108,385.58	9,379.45
12,589.70	1,246,446.04	10,767.67	7,075.61	9,986.78	21,175.49	5,588.03
....	566,854.53	....	136.30	....	241.98	....
86,200.05	6,305,223.12	43,222.71	30,674.68	25,711.14	129,803.05	14,967.48
6,615.99	2,106,275.19	20,073.93	10,389.28	8,090.65	55,624.95	5,000.00
....	486,660.15	....	....	....	....	....
46,734.53	686,752.97	15,136.30	24,098.53	10,611.96	40,826.56	6,233.79
53,350.52	3,279,688.31	35,210.23	34,487.81	18,702.61	96,451.51	11,233.79
141,401.05	12,752,178.11	84,207.35	67,821.41	49,068.10	248,534.43	26,271.19
2.7	34.3	11.2	6.0	13.9	15.9	0.4

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*$800,000.00 balance purchase agreement.

STATEMENT

Balance Sheets of Electrical Departments of

NIAGARA
SYSTEM—Continued

Municipality	Humberstone	Ingersoll	Jarvis	Kingsville	Kitchener
Population	2,738	5,177	519	2,359	33,080
ASSETS	$ c.	$ c.	$ c.	$ c.	$ c.
Lands and buildings		15,149.95		7,774.09	236,365.32
Substation equipment		33,263.83			274,352.27
Distribution system—overhead	26,605.66	56,404.76	9,897.26	33,269.41	377,713.72
Distribution system—underground					58,018.46
Line transformers	10,084.83	30,977.15	3,151.56	14,211.07	199,891.01
Meters	9,387.69	26,898.44	2,874.52	15,064.57	214,563.12
Street light equipment, regular	884.80	4,988.75	929.54	1,470.29	71,258.04
Street light equipment, ornamental		4,597.59		19,200.00	126,922.86
Miscellaneous construction expense	3,486.60	12,437.24	637.09	592.37	17,260.60
Steam or hydraulic plant					
Old plant		19,098.54			52,363.91
Total plant	50,449.58	203,816.25	17,489.97	91,581.80	1,628,709.31
Bank and cash balance	9,817.87	8,576.25	4,296.63	3,714.18	1,860.86
Securities and investments	7,000.00	11,716.57	4,000.00	19,000.00	
Accounts receivable	1,067.24	2,070.15	97.40	2,351.55	58,740.51
Inventories		1,559.10		15.61	13,241.78
Sinking fund on local debentures		80,144.39			
Equity in H-E.P.C. systems	19,894.43	176,663.91	14,376.68	38,733.34	1,240,656.14
Other assets					818.80
Total assets	88,229.12	484,546.62	40,260.68	155,396.48	2,944,027.40
Deficit					
Total	88,229.12	484,546.62	40,260.68	155,396.48	2,944,027.40
LIABILITIES					
Debenture balance	9,900.00	79,800.00	3,079.75	23,637.10	84,784.99
Accounts payable		824.61	13.37	136.33	82,296.66
Bank overdraft					
Other liabilities	1,623.70	6,246.85		22,261.57	127,734.96
Total liabilities	11,523.70	86,871.46	3,093.12	46,035.00	294,816.61
RESERVES					
For equity in H-E.P.C. systems	19,894.43	176,663.91	14,376.68	38,733.34	1,240,656.14
For depreciation	7,127.45	30,908.08	4,795.99	25,435.32	407,966.01
Other reserves		649.04		393.26	7,500.18
Total reserves	27,021.88	208,221.03	19,172.67	64,561.92	1,656,122.33
SURPLUS					
Debentures paid	22,100.00		7,420.25	9,862.90	427,365.01
Local sinking fund		80,144.39			
Operating surplus	27,583.54	109,309.74	10,574.64	34,936.66	565,723.45
Total surplus	49,683.54	189,454.13	17,994.89	44,799.56	993,088.46
Total liabilities, reserves and surplus	88,229.12	484,546.62	40,260.68	155,396.48	2,944,027.40
Percentage of net debt to total assets	16.9	0.9	11.9	27.5	10.7

"A"—Continued

Hydro Municipalities as at December 31, 1939

Lambeth P.V.	La Salle 882	Leamington 5,630	Listowel 2,773	London 73,846	London Twp.	Long Branch 4,140
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
....	1,210.68	18,261.45	1,459.49	456,233.14	....	....
....	....	7,085.62	....	1,014,705.49	....	....
7,835.31	20,966.62	56,473.76	42,976.83	818,873.19	20,613.90	57,743.12
....	....	11,991.15	5,522.87	345,907.52	....	....
1,883.12	6,775.22	26,559.91	20,744.58	363,649.12	7,409.90	15,251.39
2,579.77	4,673.80	26,817.25	17,521.47	374,052.07	5,720.15	19,532.98
1,052.75	1,054.22	1,438.72	2,987.88	72,886.70	1,578.54	4,775.25
....	....	15,178.49	1,348.66	92,286.12	....	....
315.71	2,487.08	3,232.26	2,436.90	99,044.58	498.26	2,247.46
....	....	....	....	....	....	....
....	....	....	4,745.30	....	1,733.80	....
13,666.66	37,167.62	167,038.61	99,743.98	3,637,637.93	37,554.55	99,550.20
743.18	4,841.22	8,955.21	3,299.20	98,067.37	....	4,610.43
2,000.00	....	24,477.01	7,000.00	....	1,000.00	....
1,103.47	1,801.81	4,549.95	3,485.67	244,874.05	1,921.87	6,588.46
....	60.00	....	317.75	126,732.22	....	....
....	....	....	....	474,059.65	....	....
9,319.95	13,441.88	81,544.06	73,626.19	2,346,844.03	19,053.93	23,573.96
....	....	....	....	21,331.48	....	....
26,833.26	57,312.53	286,564.84	187,472.79	6,949,546.73	59,530.35	134,323.05
....	....	....	....	....	....	....
26,833.26	57,312.53	286,564.84	187,472.79	6,949,546.73	59,530.35	134,323.05
....	6,645.08	....	740.24	568,688.99	4,250.61	12,599.42
334.10	657.90	362.05	....	139,189.07	209.21	3,372.23
....	....	....	....	....	188.96	....
105.00	628.75	18,203.72	1,716.12	94,838.23	361.77	2,920.71
439.10	7,931.73	18,565.77	2,456.36	802,716.29	5,010.55	18,892.36
9,319.95	13,441.88	81,544.06	73,626.19	2,346,844.03	19,053.93	23,573.96
4,969.07	10,426.84	38,097.20	42,317.60	1,280,944.60	9,070.55	20,934.95
42.08	370.19	113.85	....	110,790.21	42.97	338.38
14,331.10	24,238.91	119,755.11	115,943.79	3,738,578.84	28,167.45	44,847.29
4,000.00	8,854.92	48,000.00	42,449.65	1,013,211.01	14,749.39	27,705.18
....	....	....	....	474,059.65	....	....
8,063.06	16,286.97	100,243.96	26,622.99	920,980.94	11,602.96	42,878.22
12,063.06	25,141.89	148,243.96	69,072.64	2,408,251.60	26,352.35	70,583.40
26,833.26	57,312.53	286,564.84	187,472.79	6,949,546.73	59,530.35	134,323.05
2.5	18.1	1.8	1.0	5.9	12.4	17.0

STATEMENT

Balance Sheets of Electrical Departments of

NIAGARA SYSTEM—Continued

Municipality	Lucan	Lynden	Markham	Merlin	Merritton
Population	610	P.V.	1,153	P.V.	2,656
ASSETS	$ c.	$ c.	$ c.	$ c.	$ c.
Lands and buildings	375.45	241.18	....	....	6,680.39
Substation equipment	....	....	....	....	67,269.36
Distribution system—overhead	11,554.02	4,805.02	18,476.92	8,567.00	37,933.92
Distribution system—underground	....	....	....	....	....
Line transformers	4,707.48	2,490.70	9,823.85	3,631.86	10,335.55
Meters	3,814.66	1,960.02	6,831.89	2,343.57	13,149.10
Street light equipment, regular	4,549.30	354.06	753.91	560.17	4,763.80
Street light equipment, ornamental	....	....	....	....	....
Miscellaneous construction expense	605.49	263.57	1,353.98	467.65	3,447.17
Steam or hydraulic plant	....	....	....	....	....
Old plant	2,860.45	....	....	241.85	....
Total plant	28,466.85	10,114.55	37,240.55	15,812.10	143,579.29
Bank and cash balance	10.00	3,122.04	....	1,301.32	2,892.56
Securities and investments	2,000.00	....	7,000.00	7,500.00	....
Accounts receivable	695.47	293.32	1,185.20	367.35	1,136.41
Inventories	....	....	....	....	....
Sinking fund on local debentures	....	....	....	....	....
Equity in H-E.P.C. systems	17,754.56	12,719.10	18,050.95	11,256.51	139,855.27
Other assets	....	....	105.70	....	....
Total assets	48,926.88	26,249.01	63,582.40	36,237.28	287,463.53
Deficit	....	....	....	....	....
Total	48,926.88	26,249.01	63,582.40	36,237.28	287,463.53
LIABILITIES					
Debenture balance	2,476.26	1,545.35	....	2,780.46	9,136.90
Accounts payable	398.23	.95	....	204.70	5,667.24
Bank overdraft	66.19	....	415.39	....	....
Other liabilities	210.00	....	256.00	80.00	....
Total liabilities	3,150.68	1,546.30	671.39	3,065.16	14,804.14
RESERVES					
For equity in H-E.P.C. systems	17,754.56	12,719.10	18,050.95	11,256.51	139,855.27
For depreciation	7,096.49	3,963.60	6,609.46	4,060.15	19,810.89
Other reserves	....	....	117.26	23.40	....
Total reserves	24,851.05	16,682.70	24,777.67	15,340.06	159,666.16
SURPLUS					
Debentures paid	8,737.36	2,949.65	11,373.63	10,583.75	23,049.31
Local sinking fund	....	....	....	....	....
Operating surplus	12,187.79	5,070.36	26,759.71	7,248.31	89,943.92
Total surplus	20,925.15	8,020.01	38,133.34	17,832.06	112,993.23
Total liabilities, reserves and surplus	48,926.88	26,249.01	63,582.40	36,237.28	287,463.53
Percentage of net debt to total assets	10.1	11.4	1.5	12.2	10.0

"A"—Continued

Hydro Municipalities as at December 31, 1939

Milton 1,848	Milverton 1,010	Mimico 7,012	Mitchell 1,615	Moorefield P.V.	Mount Brydges P.V.	Newbury 288
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
7,844.87	640.12	19,791.60	18,139.20			
16,418.16		38,461.02	16,198.38			
23,192.02	12,275.47	78,421.59	31,963.47	3,086.96	7,554.05	6,945.58
16,234.47	8,101.30	38,025.99	14,587.17	1,211.63	1,845.43	1,797.86
14,465.89	4,996.58	30,379.17	13,385.61	1,311.68	2,731.68	1,360.80
5,033.13	765.09	9,773.00	7,155.89	295.88	1,385.36	866.47
4,617.52	781.21	10,258.10	2,139.13	356.90	173.12	607.93
3,092.54			1,380.00			348.22
90,898.60	27,559.77	225,110.47	104,948.85	6,263.05	13,689.64	11,926.86
		20,799.16	1,677.76	2,616.83	3,073.59	1,913.67
4,000.00	4,000.00		7,150.00		4,000.00	
4,036.09	1,589.92	3,328.64	9,495.90	227.68	1,306.27	965.80
3,399.57			5,383.61			
96,470.39	41,285.65	134,745.68	42,154.22	5,934.50	7,278.96	4,341.59
						159.15
198,804.65	74,435.34	383,983.95	170,810.34	15,042.06	29,348.46	19,307.07
198,804.65	74,435.34	383,983.95	170,810.34	15,042.06	29,348.46	19,307.07
3,225.37		46,368.71			1,239.95	1,300.00
36.29	53.90	1,784.22	162.06	90.02	242.26	.35
1,022.43	24.80					
370.18		6,443.05	266.00		152.40	40.00
4,654.27	78.70	54,595.98	428.06	90.02	1,634.61	1,340.35
96,470.39	41,285.65	134,745.68	42,154.22	5,934.50	7,278.96	4,341.59
20,396.28	7,361.73	64,780.33	41,940.70	3,171.93	4,030.30	4,145.52
201.27		2,320.20	2,003.90		100.00	
117,067.94	48,647.38	201,846.21	86,098.82	9,106.43	11,409.26	8,487.11
29,821.04	9,500.00	80,631.29	22,295.22	4,500.00	2,980.05	8,454.39
47,261.40	16,209.26	46,910.47	61,988.24	1,345.61	13,324.54	1,025.22
77,082.44	25,709.26	127,541.76	84,283.46	5,845.61	16,304.59	9,479.61
198,804.65	74,435.34	383,983.95	170,810.34	15,042.06	29,348.46	19,307.07
4.6	0.2	21.9	0.3	1.0	7.4	8.9

STATEMENT

Balance Sheets of Electrical Departments of

NIAGARA SYSTEM—Continued

Municipality Population	New Hamburg 1,458	New Toronto 7,140	Niagara Falls 18,928	Niagara-on the-Lake 1,670	North York Twp.
ASSETS	$ c.	$ c.	$ c.	$ c.	$ c.
Lands and buildings	2,513.19	44,097.67	129,536.29	2,307.35	28,797.82
Substation equipment	1,217.05	....	230,899.67	16,382.40	....
Distribution system—overhead	24,650.87	88,210.70	196,561.95	35,057.43	420,543.17
Distribution system—underground	....	8,605.69	....	....	....
Line transformers	8,097.16	38,527.56	176,357.52	11,415.19	120,460.13
Meters	9,496.53	36,944.33	117,074.97	9,531.57	70,097.52
Street light equipment, regular	2,197.40	13,280.51	120,862.99	3,489.85	156.00
Street light equipment, ornamental	....	....	....	....	13,491.21
Miscellaneous construction expense	954.94	7,884.63	11,481.58	2,360.42	23,023.98
Steam or hydraulic plant	....	....	....	....	....
Old plant	5,242.56	....	18,723.99	....	....
Total plant	54,369.70	237,551.09	1,001,498.96	80,544.21	676,569.83
Bank and cash balance	25.00	20,020.21	74,941.09	3,161.26	10,167.09
Securities and investments	8,000.00	....	50,000.00	....	....
Accounts receivable	1,974.86	6,424.12	2,244.42	3,767.44	11,469.78
Inventories	747.13	3,431.75	8,117.95	1,758.26	272.44
Sinking fund on local debentures	....	....	....	....	....
Equity in H-E.P.C. systems	47,010.81	419,051.52	545,286.27	29,527.21	132,845.43
Other assets	....	....	2,025.83	....	....
Total assets	112,127.50	686,478.69	1,684,114.52	118,758.38	831,324.57
Deficit	....	....	....	....	....
Total	112,127.50	686,478.69	1,684,114.52	118,758.38	831,324.57
LIABILITIES					
Debenture balance	1,115.24	1,845.35	172,831.18	14,427.35	256,538.78
Accounts payable	....	417.53	2,176.53	489.45	58,482.49
Bank overdraft	1,867.99	....	....	....	....
Other liabilities	171.50	7,014.26	16,700.24	252.50	24,041.04
Total liabilities	3,154.73	9,277.14	191,707.95	15,169.30	339,062.31
RESERVES					
For equity in H-E.P.C. systems	47,010.81	419,051.52	545,286.27	29,527.21	132,845.43
For depreciation	16,828.61	63,351.91	252,175.27	16,855.85	115,357.11
Other reserves	33.83	1,413.78	11,593.55	1,115.86	1,814.04
Total reserves	63,873.25	483,817.21	809,055.09	47,498.92	250,016.58
SURPLUS					
Debentures paid	16,613.84	6,154.65	517,411.82	22,074.07	186,483.09
Local sinking fund	....	....	....	....	....
Operating surplus	28,485.68	187,229.69	165,939.66	34,016.09	55,762.59
Total surplus	45,099.52	193,384.34	683,351.48	56,090.16	242,245.68
Total liabilities, reserves and surplus	112,127.50	686,478.69	1,684,114.52	118,758.38	831,324.57
Percentage of net debt to total assets	4.8	3.5	16.8	17.0	47.5

"A"—Continued

Hydro Municipalities as at December 31, 1939

Norwich	Oil Springs	Otterville	Palmerston	Paris	Parkhill	Petrolia
1,365	514	P.V.	1,406	4,369	900	2,747
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c
4,660.42	6,265.18	....	....	8,781.50	....	900.00
....	....	....	1,346.28	28,126.55	....	5,956.75
11,458.56	14,232.31	8,199.09	32,477.85	56,192.87	17,977.62	48,889.73
....	....	....	....	....	....	....
6,847.08	5,202.85	4,115.99	10,958.35	24,213.54	4,085.20	29,719.79
7,693.83	3,786.30	2,744.27	7,954.98	20,765.49	4,621.34	16,339.83
4,685.64	308.24	1,571.42	6,765.70	14,084.12	995.06	6,366.05
....	....	....	....	....	....	....
2,312.60	1,950.02	142.00	3,012.43	2,108.23	1,347.45	7,414.81
....	....	....	....	....	....	....
3,509.82	....	....	4,018.71	....	....	3,389.94
41,167.95	31,744.90	16,772.77	66,534.30	154,272.30	29,026.67	118,976.90
1,982.52	3,993.24	3,571.61	656.46	9,246.50	1,760.25	874.98
5,000.00	860.11	....	....	33,500.00	4,000.00	14,400.00
4,522.53	1,858.06	1,685.59	2,202.64	996.25	1,978.88	5,209.06
2,345.31	147.12	....	2,580.09	....	....	479.85
....	....	....	....	....	....	....
34,883.10	23,731.37	8,312.17	40,758.56	106,436.56	17,957.64	96,709.20
....	....	....	....	....	....	....
89,901.41	62,334.80	30,342.14	112,732.05	304,451.61	54,723.44	236,649.99
....	....	....	....	....	....	....
89,901.41	62,334.80	30,342.14	112,732.05	304,451.61	54,723.44	236,649.99
1,987.35	....	....	1,201.85	4,399.63	1,129.00	12,030.17
120.70	3,898.36	266.94	2,888.46	....	115.27	361.14
....	....	....	....	....	....	....
273.50	35.75	43.88	334.80	....	95.00	967.50
2,381.55	3,934.11	310.82	4,425.11	4,399.63	1,339.27	13,358.81
34,883.10	23,731.37	8,312.17	40,758.56	106,436.56	17,957.64	96,709.20
8,535.34	8,873.95	5,887.58	8,638.22	77,362.29	8,961.21	38,317.27
780.48	90.03	....	420.07	88.67	....	453.50
44,198.92	32,695.35	14,199.75	49,816.85	183,887.52	26,918.85	135,479.97
11,768.65	16,721.31	4,500.00	25,798.15	87,600.37	13,501.02	37,969.83
....	....	....	....	....	....	....
31,552.29	8,984.03	11,331.57	32,691.94	28,564.09	12,964.30	49,841.38
43,320.94	25,705.34	15,831.57	58,490.09	116,164.46	26,465.32	87,811.21
89,901.41	62,334.80	30,342.14	112,732.05	304,451.61	54,723.44	236,649.99
4.3	10.2	1.4	6.1	2.2	3.6	9.5

STATEMENT

Balance Sheets of Electrical Departments of

NIAGARA SYSTEM—Continued

Municipality Population	Plattsville P.V.	Point Edward 1,177	Port Colborne 6,503	Port Credit 1,901	Port Dalhousie 1,590
ASSETS	$ c.	$ c.	$ c.	$ c.	$ c.
Lands and buildings	....	....	25,458.94	675.00	....
Substation equipment	....	....	....	....	....
Distribution system—overhead	4,384.03	21,904.08	93,442.35	30,985.51	20,693.12
Distribution system—underground	....	....	....	....	....
Line transformers	2,026.17	7,633.43	31,043.91	12,481.40	10,854.99
Meters	2,159.75	5,737.33	25,030.76	11,598.30	10,819.49
Street light equipment, regular	147.15	3,135.31	4,744.86	5,137.66	1,041.19
Street light equipment, ornamental	....	....	16,611.59	....	....
Miscellaneous construction expense	535.92	1,025.99	7,736.57	3,155.17	3,279.67
Steam or hydraulic plant	....	....	....	....	....
Old plant	....	....	9,929.60	....	6,018.38
Total plant	9,253.02	39,436.14	213,998.58	64,033.04	52,706.84
Bank and cash balance	3,110.93	510.29	8,498.02	35.06	75.17
Securities and investments	2,000.00	13,000.00	2,500.00	....	3,000.00
Accounts receivable	309.62	3,229.32	22,694.01	3,382.46	5,286.91
Inventories	....	593.65	4,223.93	....	....
Sinking fund on local debentures	....	....	....	....	4,585.61
Equity in H-E.P.C. systems	8,585.50	54,986.49	91,408.25	38,006.72	33,524.30
Other assets	....	....	....	....	....
Total assets	23,259.07	111,755.89	343,322.79	105,457.28	99,178.83
Deficit	....	....	....	....	....
Total	23,259.07	111,755.89	343,322.79	105,457.28	99,178.83
LIABILITIES					
Debenture balance	1,475.26	3,672.71	44,510.79	4,328.36	6,165.27
Accounts payable	32.83	888.29	189.88	3,345.89	88.61
Bank overdraft	....	....	16,611.59	....	....
Other liabilities	....	420.03	3,139.91	547.74	116.00
Total liabilities	1,508.09	4,981.03	64,452.17	8,221.99	6,369.88
RESERVES					
For equity in H-E.P.C. systems	8,585.50	54,986.49	91,408.25	38,006.72	33,524.30
For depreciation	4,353.48	14,581.54	52,774.27	19,129.11	7,479.48
Other reserves	....	116.45	3,187.68	336.93	1,076.31
Total reserves	12,938.98	69,684.48	147,370.20	57,472.76	42,080.09
SURPLUS					
Debentures paid	3,761.74	13,327.29	101,489.21	10,171.64	16,334.73
Local sinking fund	....	....	....	....	4,585.61
Operating surplus	5,050.26	23,763.09	30,011.21	29,590.89	29,808.52
Total surplus	8,812.00	37,090.38	131,500.42	39,762.53	50,728.86
Total liabilities, reserves and surplus	23,259.07	111,755.89	343,322.79	105,457.28	99,178.83
Percentage of net debt to total assets	10.3	8.8	20.3	12.1	2.9

"A"—Continued

Hydro Municipalities as at December 31, 1939

Port Dover 1,705	Port Rowan 556	Port Stanley *737	Preston 6,422	Princeton P.V.	Queenston P.V.	Richmond Hill 1,317
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
248.75	....	1,574.60	....	....	....	....
....	....	....	56,955.28	....	....	600.00
35,381.92	10,157.64	26,757.25	90,956.86	4,370.06	8,443.61	10,872.77
....	....	....	....	....	....	....
12,873.47	1,883.34	13,298.52	50,818.82	2,636.23	3,040.34	9,519.32
9,540.73	2,459.00	11,184.91	40,712.02	1,385.84	1,599.05	6,351.79
2,673.13	940.33	2,088.37	5,452.47	207.93	435.63	1,334.77
....	....	....	....	....	....	....
3,635.14	729.77	7,519.32	8,774.39	112.41	2,499.80	456.27
....	....	....	....	....	....	....
....	....	577.51	32,126.75	....	....	....
64,353.14	16,170.08	63,000.48	285,796.59	8,712.47	16,018.43	29,134.92
4,066.69	2,039.37	29.20	12,266.40	5,768.09	1,228.74	1,928.60
....	2,000.00	8,000.00	....	....	....	....
3,023.38	1,151.84	1,124.80	11,770.84	692.10	633.78	2,153.73
65.25	....	....	5,922.71	....	....	123.45
....	....	....	....	....	....	....
24,093.50	6,338.62	38,146.16	246,632.91	8,701.47	6,511.03	18,169.40
20.00	....	....	....	25.00	....	....
95,621.96	27,699.91	110,300.64	562,389.45	23,899.13	24,391.98	51,510.10
....	....	....	....	....	....	....
95,621.96	27,699.91	110,300.64	562,389.45	23,899.13	24,391.98	51,510.10
1,727.24	5,955.38	1,539.87	24,711.54	999.93	2,208.41	1,318.20
1,974.05	....	899.27	7,422.67	164.71	54.65	264.34
....	....	....	....	....	....	....
663.00	205.00	210.09	1,238.49	....	25.00	429.78
4,364.29	6,160.38	2,649.23	33,372.70	1,164.64	2,288.06	2,012.32
24,093.50	6,338.62	38,146.16	246,632.91	8,701.47	6,511.03	18,169.40
13,970.10	3,773.77	14,351.83	132,178.55	3,414.44	4,201.56	2,693.96
....	....	75.23	575.65	....	....	63.72
38,063.60	10,112.39	52,573.22	379,387.11	12,115.91	10,712.59	20,927.08
27,272.76	5,044.62	17,410.13	128,088.46	2,550.07	7,291.59	10,881.80
25,921.31	6,382.52	37,668.06	21,541.18	8,068.51	4,099.74	17,688.90
53,194.07	11,427.14	55,078.19	149,629.64	10,618.58	11,391.33	28,570.70
95,621.96	27,699.91	110,300.64	562,389.45	23,899.13	24,391.98	51,510.10
6.1	28.8	3.6	10.6	7.7	12.8	6.0

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*Winter population 741; Summer population estimated 3,500.

STATEMENT

Balance Sheets of Electrical Departments of

NIAGARA
SYSTEM—Continued

Municipality	Ridgetown	Riverside	Rockwood	Rodney	St. Catharines
Population	1,958	5,090	P.V.	695	27,647
ASSETS	$ c.	$ c.	$ c.	$ c.	$ c.
Lands and buildings	3,018.17	8,611.31	79.00	....	52,499.01
Substation equipment	1,024.24	....	....	....	136,720.18
Distribution system—overhead	23,528.29	91,840.85	8,292.85	12,090.24	246,182.01
Distribution system—underground	....	....	....	....	....
Line transformers	10,570.71	31,701.24	2,956.33	3,595.57	158,182.86
Meters	9,987.34	24,445.63	3,258.63	3,907.52	106,608.79
Street light equipment, regular	6,198.80	....	703.05	3,533.02	20,360.91
Street light equipment, ornamental	1,431.73	17,647.89	....	....	29,486.71
Miscellaneous construction expense	1,427.27	7,017.36	566.85	794.06	29,337.93
Steam or hydraulic plant	....	....	....	....	....
Old plant	5,088.46	....	....	700.00	17,507.89
Total plant	62,275.01	181,264.28	15,856.71	24,620.41	796,886.29
Bank and cash balance	812.63	12,031.11	705.84	1,801.07	8,832.40
Securities and investments	7,000.00	....	1,000.00	....	57,000.00
Accounts receivable	2,194.66	9,969.81	548.19	872.13	51,270.59
Inventories	334.56	385.75	86.83	....	10,976.36
Sinking fund on local debentures	....	....	....	....	91,950.85
Equity in H-E.P.C. systems	40,062.29	77,160.13	10,676.75	12,639.77	552,138.27
Other assets	....	....	....	....	215.27
Total assets	112,679.15	280,811.08	28,874.32	39,933.38	1,569,270.03
Deficit	....	....	....	....	....
Total	112,679.15	280,811.08	28,874.32	39,933.38	1,569,270.03
LIABILITIES					
Debenture balance	3,751.25	26,084.92	1,778.03	....	156,250.00
Accounts payable	1,948.42	3,141.52	51.01	48.48	39,452.47
Bank overdraft	....	....	....	....	....
Other liabilities	2,068.21	19,948.33	126.00	270.00	29,814.21
Total liabilities	7,767.88	49,174.77	1,955.04	318.48	225,516.68
RESERVES					
For equity in H-E.P.C. systems	40,062.29	77,160.13	10,676.75	12,639.77	552,138.27
For depreciation	16,404.12	40,149.32	6,026.92	2,709.65	217,801.19
Other reserves	270.63	3,025.90	....	120.32	7,918.92
Total reserves	56,737.04	120,335.35	16,703.67	15,469.74	777,858.38
SURPLUS					
Debentures paid	15,704.74	56,415.08	2,721.97	8,500.00	145,772.91
Local sinking fund	....	....	....	....	91,950.85
Operating surplus	32,469.49	54,885.88	7,493.64	15,645.16	328,171.21
Total surplus	48,174.23	111,300.96	10,215.61	24,145.16	565,894.97
Total liabilities, reserves and surplus	112,679.15	280,811.08	28,874.32	39,933.38	1,569,270.03
Percentage of net debt to total assets	8.9	16.9	10.7	1.2	11.6

"A"—Continued

Hydro Municipalities as at December 31, 1939

St. Clair Beach 108	St. George P.V.	St. Jacobs P.V.	St. Marys 4,033	St. Thomas 16,352	Sarnia 18,269	Scarboro Twp.
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
....	....	....	18,492.48	78,779.06	119,198.60	17,273.95
....	....	....	27,421.62	133,555.05	209,248.48	301.95
8,119.94	6,088.99	6,904.32	62,721.73	111,206.53	221,462.51	302,138.14
....	....	....	....	52,815.87	....	....
2,880.61	4,038.89	3,696.90	25,060.20	66,029.86	79,916.26	72,756.44
1,688.92	3,513.85	3,266.21	24,590.92	76,308.68	77,190.53	73,814.93
....	337.24	368.97	6,471.74	22,238.77	27,426.19	21,007.15
....	....	....	....	3,693.04	8,271.83	....
230.16	374.18	575.70	11,445.06	15,239.37	26,380.69	9,116.54
....	....	....	....	....	....	....
....	....	....	20,696.85	....	55,445.72	....
12,919.63	14,353.15	14,812.10	196,900.60	559,866.23	824,540.81	496,409.10
2,056.43	2,578.79	904.23	25.00	2,810.95	34,375.67	63,114.38
....	....	3,000.00	10,000.00	56,000.00	100,000.00	....
372.02	493.30	862.82	5,378.31	17,748.78	26,952.91	31,173.21
....	....	....	1,145.20	9,938.32	22,775.61	....
....	....	....	2,049.20	....	....	....
6,360.78	13,327.31	15,213.81	125,978.53	464,937.70	583,786.77	173,952.74
....	....	....	....	....	....	1,084.43
21,708.86	30,752.55	34,792.96	341,476.84	1,111,301.98	1,592,431.77	765,733.86
....	....	....	....	....	....	....
21,708.86	30,752.55	34,792.96	341,476.84	1,111,301.98	1,592,431.77	765,733.86
1,109.35	1,772.18	....	25,658.74	1,762.44	24,821.42	98,397.08
398.32	2.25	201.20	1,992.38	1,684.95	....	11,673.66
....	....	....	4,921.99	....	....	....
96.59	157.50	....	360.00	14,051.51	15,039.93	34,929.98
1,604.26	1,931.93	201.20	32,933.11	17,498.90	39,861.35	145,000.72
6,360.78	13,327.31	15,213.81	125,978.53	464,937.70	583,786.77	173,952.74
4,039.30	3,435.08	3,271.11	66,506.59	166,067.09	200,328.97	124,921.49
49.50	....	....	598.90	962.21	2,052.19	687.63
10,449.58	16,762.39	18,484.92	193,084.02	631,967.00	786,167.93	299,561.86
5,232.10	4,227.82	6,000.00	88,588.28	137,181.63	313,178.58	192,171.19
....	....	....	2,049.20	....	....	....
4,422.92	7,830.41	10,106.84	24,822.23	324,654.45	453,223.91	129,000.09
9,655.02	12,058.23	16,106.84	115,459.71	461,836.08	766,402.49	321,171.28
21,708.86	30,752.55	34,792.96	341,476.84	1,111,301.98	1,592,431.77	765,733.86
10.4	11.1	1.0	14.5	2.1	3.1	24.9

STATEMENT

Balance Sheets of Electrical Departments of

NIAGARA SYSTEM—Continued

Municipality	Seaforth	Simcoe	Springfield	Stamford Twp.	Stouffville
Population	1,705	6,052	P.V.		1,160
ASSETS	$ c.	$ c.	$ c.	$ c.	$ c.
Lands and buildings	1,836.39	10,663.97	....	7,572.14	....
Substation equipment	5,999.16	41,527.90	....	37,384.60	....
Distribution system—overhead	32,516.61	57,406.57	10,060.42	140,505.85	13,909.28
Distribution system—underground	....	1,412.24	....	....	....
Line transformers	11,302.60	39,955.56	3,106.91	51,508.12	4,827.29
Meters	9,711.82	33,922.61	2,168.55	37,345.27	5,192.32
Street light equipment, regular	4,969.46	7,901.70	609.47	10,057.76	1,613.55
Street light equipment, ornamental	....	3,500.00	....	....	....
Miscellaneous construction expense	1,563.32	7,403.21	685.08	10,768.90	749.31
Steam or hydraulic plant	....	....	....	....	....
Old plant	....	927.92	....	13,743.66	....
Total plant	67,899.36	204,621.68	16,630.43	308,886.30	26,291.75
Bank and cash balance	2,520.50	19,859.11	1,930.19	8,831.80	4,778.33
Securities and investments	100.00	10,000.00	500.00	....	8,000.00
Accounts receivable	1,711.81	5,688.39	979.25	21,410.77	1,763.37
Inventories	1,695.85	3,862.72	....	7,310.80	....
Sinking fund on local debentures	....	....	....	....	....
Equity in H-E.P.C. systems	58,298.63	98,351.25	8,753.71	91,628.77	15,466.51
Other assets	....	....	....	216.50	....
Total assets	132,226.15	342,383.15	28,793.58	438,284.94	56,299.96
Deficit	....	....	....	....	....
Total	132,226.15	342,383.15	28,793.58	438,284.94	56,299.96
LIABILITIES					
Debenture balance	....	33,695.33	2,385.21	96,901.48	....
Accounts payable	....	39.42	2.39	8,624.05	385.85
Bank overdraft	....	....	....	....	....
Other liabilities	358.84	3,902.50	2.00	5,199.46	145.00
Total liabilities	358.84	37,637.25	2,389.60	110,724.99	530.85
RESERVES					
For equity in H-E.P.C. systems	58,298.63	98,351.25	8,753.71	91,628.77	15,466.51
For depreciation	22,296.22	28,415.00	2,121.84	56,973.35	4,524.52
Other reserves	349.11	15,000.00	....	3,559.92	87.23
Total reserves	80,943.96	141,766.25	10,875.55	152,162.04	20,078.26
SURPLUS					
Debentures paid	25,000.00	41,739.57	7,114.79	143,376.69	14,673.90
Local sinking fund	....	....	....	....	....
Operating surplus	25,923.35	121,240.08	8,413.64	32,021.22	21,016.95
Total surplus	50,923.35	162,979.65	15,528.43	175,397.91	35,690.85
Total liabilities, reserves and surplus	132,226.15	342,383.15	28,793.58	438,284.94	56,299.96
Percentage of net debt to total assets	0.5	14.2	11.9	31.9	1.3

"A"—Continued

Hydro Municipalities as at December 31, 1939

Stratford 17,159	Strathroy 2,917	Streetsville 700	Sutton 852	Swansea 5,831	Tavistock 1,063	Tecumseh 2,237	Thamesford P.V.
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
141,389.22	8,856.05	7,340.41	....	....	3,564.06	1,018.51	....
131,638.26	23,640.34	1,172.04	....	....	....	....	....
158,686.57	50,389.39	8,957.46	20,805.20	71,698.37	13,848.15	35,609.78	7,757.33
22,971.15	....	....	....	....	....	....	....
100,236.67	23,445.05	5,167.99	8,060.31	45,866.42	9,670.45	11,478.87	3.600.32
85,135.54	17,858.16	3,279.75	6,639.18	33,431.86	5,880.37	11,444.76	3,278.48
25,785.92	5,863.19	1,429.74	1,923.22	5,381.78	1,102.93	....	298.97
....	....	....	....	....	....	4,760.95	....
25,072.60	5,729.12	715.64	2,115.28	6,699.15	1,481.30	2,622.94	376.81
....	....	10,641.55	....	....	....	....	....
31,520.00	12,343.15	....	675.00	....	....	....	....
722,435.93	148,124.45	38,704.58	40,218.19	163,077.58	35,547.26	66,935.81	15.311.91
33,921.07	4,868.06	3,113.09	2,554.40	8,101.33	....	3,644.08	411.65
90,000.00	17,000.00	....	....	....	2,000.00	....	7,500.00
23,412.07	7,085.42	1,030.15	4,013.45	9,991.35	1,784.85	1,619.95	679.19
11,035.01	3,074.81	....	....	15.00	24.59	....	....
267,969.57	....	....	....	....	....	....	....
567,229.35	82,942.82	1,974.54	15,166.82	70,089.51	42,504.11	24,182.46	16.017.35
335.57	21.60	....	....	....	....	....	....
1.716,338.57	263,117.16	44,822.36	61,952.86	251,274.77	81,860.81	96,382.30	39.920.10
....	....	....	....	....	....	....	....
1,716,338.57	263,117.16	44,822.36	61,952.86	251,274.77	81,860.81	96,382.30	39.920 10
340,000.00	23,994.54	11,660.49	6,505.94	75,838.07	2.258.54	4.849.76	744 37
912.83	354.24	234.46	....	1,450.86	199.18	3.502.22	176 64
....	....	....	....	....	194.99	....	....
4,684.23	844.59	218.87	5.00	3,276.98	....	5,610.86	67.00
345,597.06	25,193.37	12,113.82	6,510.94	80,565.91	2,652.71	13,962.84	988.01
567.229.35	82,942.82	1,974.54	15.166.82	70,089.51	42,504.11	24.182.46	16,017.35
305,714.96	38,012.44	3,844.85	9,585.12	47,786.24	12,155.41	15,721.77	5.785.47
3,599.04	1,110.56	50.00	....	200.00	....	513 68	....
876,543.35	122,065.82	5,869.39	24,751.94	118,075.75	54,659.52	40,417.91	21.802.82
115,800.00	42,237.46	5,884.59	19,494.06	26,475.68	3,741.46	21,150.24	4.613.66
267,969.57	....	....	....	....	....	....	....
110,428.59	73,620.51	20,954.56	11.195.92	26,157.43	20.807.12	20.851.31	12.515.61
494.198.16	115.857.97	26,839.15	30.689.98	52,633.11	24.548.58	42,001.55	17.129.27
1.716,338.57	263.117.16	44.822.36	61.952.86	251,274.77	81.860.81	96.382.30	39.920.10
8.8	13.9	28.3	13.9	44.4	6.7	13.6	4.1

STATEMENT

Balance Sheets of Electrical Departments of

NIAGARA SYSTEM—Continued

Municipality Population	Thamesville 833	Thedford 595	Thorndale P.V.	Thorold 5,001	Tilbury 1,980
ASSETS	$ c.	$ c.	$ c.	$ c.	$ c.
Lands and buildings	681.69	....	....	10,195.09	969.46
Substation equipment	....	....	....	....	....
Distribution system—overhead	12,851.54	9,648.96	3,586.56	41,318.91	16,346.60
Distribution system—underground	....	....	....	....	....
Line transformers	5,364.88	3,500.60	1,595.95	20,426.42	12,783.84
Meters	4,269.88	2,658.97	1,840.53	22,096.76	7,610.48
Street light equipment, regular	2,267.33	903.22	181.19	3,128.58	1,042.37
Street light equipment, ornamental	....	....	....	....	....
Miscellaneous construction expense	554.86	1,542.41	310.45	4,069.99	1,630.60
Steam or hydraulic plant	....	....	....	13,388.68	....
Old plant	4,445.68	433.78	....	3,800.00	3,049.47
Total plant	30,435.86	18,687.94	7,514.68	118,424.43	43,432.82
Bank and cash balance	2,826.73	3,036.26	2,447.39	17,763.27	4,663.97
Securities and investments	5,000.00	2,500.00	....	20,000.00	15,000.00
Accounts receivable	1,034.53	476.91	910.60	599.69	1,646.30
Inventories	....	....	....	3,328.48	4.31
Sinking fund on local debentures	....	....	....	....	....
Equity in H-E.P.C. systems	16,446.32	8,888.10	8,072.97	93,528.88	43,411.73
Other assets	....	....	....	....	....
Total assets	55,743.44	33,589.21	18,945.64	253,644.75	108,159.13
Deficit	....	....	....	....	....
Total	55,743.44	33,589.21	18,945.64	253,644.75	108,159.13
LIABILITIES					
Debenture balance	....	2,637.36	811.29	....	3,028.26
Accounts payable	1.93	....	.56	4,582.25	102.24
Bank overdraft	....	....	....	....	....
Other liabilities	280.00	27.31	45.57	2,250.63	202.18
Total liabilities	281.93	2,664.67	857.42	6,832.88	3,332.68
RESERVES					
For equity in H-E.P.C. systems	16,446.32	8,888.10	8,072.97	93,528.88	43,411.73
For depreciation	9,652.54	4,425.56	4,180.53	34,124.17	15,739.94
Other reserves	157.94	....	22.88	....	132.88
Total reserves	26,256.80	13,313.66	12,276.38	127,653.05	59,284.55
SURPLUS					
Debentures paid	11,187.80	13,862.64	2,275.19	5,000.00	10,971.74
Local sinking fund	....	....	....	....	....
Operating surplus	18,016.91	3,748.24	3,536.65	114,158.82	34,570.16
Total surplus	29,204.71	17,610.88	5,811.84	119,158.82	45,541.90
Total liabilities, reserves and surplus	55,743.44	33,589.21	18,945.64	253,644.75	108,159.13
Percentage of net debt to total assets	0.7	10.8	7.9	4.2	5.1

*As in the case of other municipalities listed in Statements "A" and "B", the figures for Toronto give effect to the annual adjustment of the cost of power for the year ended October 31, 1939.

In the case of Toronto this adjustment is a credit balance of $56,605.16. In the reports issued

"A"—Continued

Hydro Municipalities as at December 31, 1939

Tillsonburg 3,945	Toronto* 647,803	Toronto Twp.	Trafalgar Twp. Area No. 1	Trafalgar Twp. Area No. 2	Wallaceburg 4,715	Wardsville 236
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
4,824.27	5,494,100.74	6,736.78			45,164.98	
21,248.71	14,639,448.93				11,325.11	
49,582.16	6,749,819.18	198,934.35	23,409.56	12,143.84	59,889.14	5,227.32
	4,145,396.68					
20,794.23	3,736,789.12	71,585.64	10,237.65	2,495.54	36,273.56	1,501.32
21,505.44	3,255,329.55	40,156.40	5,152.37	1,674.86	22,561.23	1,308.68
12,300.77	503,673.49	4,310.03			11,504.94	639.94
4,308.98	2,544,749.11	7,699.30	1,551.07	343.16	3,520.24	503.73
	3,570,474.01	619.65			20,941.07	193.94
134,564.56	44,639,780.81	330,042.15	40,350.65	16,657.40	211,180.27	9,374.93
50.00	1,024,878.24	17,387.15	2,371.68	1,344.00	9,570.68	1,400.69
4,000.00	1,116,847.82	10,000.00	4,000.00	6,000.00	20,000.00	
8,299.77	2,573,335.28	3,240.11	368.14	161.34	11,032.61	1,248.74
4,268.12	586,190.80				9,243.56	
	8,335,070.53					
82,416.37	17,661,429.52	102,843.54	3,550.12	1,127.54	175,363.68	3,439.58
		32.33				
233,598.82	75,937,533.00	463,545.28	50,640.59	25,290.28	436,390.80	15,463.94
233,598.82	75,937,533.00	463,545.28	50,640.59	25,290.28	436,390.80	15,463.94
2,874.15	18,428,890.02	27,638.93	5,866.15	9,461.15	24,396.50	1,278.58
531.77	1,603,938.19	9,315.86	130.51	108.78	139.38	47.74
2,647.41						
3,831.95	145,627.31	3,083.22			2,487.84	
9,885.28	20,178,455.52	40,038.01	5,996.66	9,569.93	27,023.72	1,326.32
82,416.37	17,661,429.52	102,843.54	3,550.12	1,127.54	175,363.68	3,439.58
34,660.86	9,760,289.90	127,477.64	18,159.41	3,126.65	55,329.63	3,271.75
858.11	1,223,229.27	568.98			1,347.03	25.22
117,935.34	28,644,948.69	230,890.16	21,709.53	4,254.19	232,040.34	6,736.55
33,125.85	15,933,178.35	76,361.07	13,560.26		47,140.08	6,283.82
	8,335,070.53					
72,652.35	2,845,879.91	116,256.04	9,374.14	11,466.16	130,186.66	1,117.25
105,778.20	27,114,128.79	192,617.11	22,934.40	11,466.16	177,326.74	7,401.07
233,598.82	75,937,533.00	463,545.28	50,640.59	25,290.28	436,390.80	15,463.94
6.5	23.7	11.1	12.7	39.6	10.3	11.0

by the Toronto Hydro-Electric System, such adjustment will be made in the subsequent year in accordance with The Hydro-Electric Power Commission's general authorization dated January 25, 1940.

STATEMENT

Balance Sheets of Electrical Departments of

NIAGARA
SYSTEM—Continued

Municipality Population	Water-down 904	Water-ford 1,216	Waterloo 8,524	Watford 964	Welland 11,072
Assets	$ c.	$ c.	$ c.	$ c.	$ c.
Lands and buildings	200.00	1,273.13	14,454.37	....	75,313.71
Substation equipment	....	....	65,571.54	....	103,122.24
Distribution system—overhead	16,702.33	16,499.47	96,969.52	17,520.96	137,207.42
Distribution system—underground	....	....	....	....	8,162.14
Line transformers	7,232.38	8,148.64	52,544.06	7,018.62	62,299.66
Meters	6,601.59	6,836.68	39,776.38	5,683.39	62,421.42
Street light equipment, regular	981.61	3,231.62	14,218.91	2,169.05	4,334.01
Street light equipment, ornamental	....	....	3,106.80	....	36,513.75
Miscellaneous construction expense	86.58	851.19	7,391.05	2,141.81	11,302.86
Steam or hydraulic plant	....	....	....	....	....
Old plant	....	....	23,880.17	657.44	49,792.69
Total plant	31,804.49	36,840.73	317,912.80	35,191.27	550,469.90
Bank and cash balance	6,671.97	1,759.97	14,238.89	1,795.22	29,378.37
Securities and investments	....	5,300.00	35,000.00	5,800.00	9,928.43
Accounts receivable	1,298.94	698.57	1,454.43	3,319.02	8,596.48
Inventories	....	....	923.17	224.64	12,697.44
Sinking fund on local debentures	....	....	....	....	*76,194.65
Equity in H-E.P.C. systems	21,413.58	30,094.93	245,077.62	21,730.36	283,401.21
Other assets	....	....	....	....	75.41
Total assets	61,188.98	74,694.20	614,606.91	68,060.51	970,741.89
Deficit	....	....	....	....	....
Total	61,188.98	74,694.20	614,606.91	68,060.51	970,741.89
Liabilities					
Debenture balance	....	....	7,888.49	....	122,394.63
Accounts payable	....	86.50	679.06	....	547.81
Bank overdraft	....	....	....	....	....
Other liabilities	125.80	....	3,106.80	301.41	44,821.13
Total liabilities	125.80	86.50	11,674.35	301.41	167,763.57
Reserves					
For equity in H-E.P.C. systems	21,413.58	30,094.93	245,077.62	21,730.36	283,401.21
For depreciation	8,534.46	12,736.32	139,519.56	10,153.29	154,648.66
Other reserves	....	....	385.26	120.16	3,132.56
Total reserves	29,948.04	42,831.25	384,982.44	32,003.81	441,182.43
Surplus					
Debentures paid	8,000.00	7,745.53	98,111.51	9,713.21	152,605.37
Local sinking fund	....	....	....	....	*76,194.65
Operating surplus	23,115.14	24,030.92	119,838.61	26,042.08	132,995.87
Total surplus	31,115.14	31,776.45	217,950.12	35,755.29	361,795.89
Total liabilities, reserves and surplus	61,188.98	74,694.20	614,606.91	68,060.51	970,741.89
Percentage of net debt to total assets	0.3	0.1	2.3	0.7	9.6

*Interest improvement for 1938-39 not included.

"A"—Continued

Hydro Municipalities as at December 31, 1939

Wellesley	West Lorne	Weston	Wheatley	Windsor	Woodbridge	Woodstock
P.V.	837	5,099	760	103,813	830	11,418
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
		11,903.31		492,247.62		40,007.94
		62,127.55		1,074,050.78		121,732.82
7,422.83	12,023.17	62,139.27	16,334.74	1,255,264.66	17,492.79	123,396.58
				144,172.24		
2,175.97	4,924.79	41,115.68	4,406.73	552,304.83	6,624.62	68,436.54
2,757.45	3,792.88	27,077.00	4,368.12	512,250.01	5,064.18	61,126.18
545.11	824.14	30,018.90	1,807.14	75,300.67	574.03	21,283.69
				1,021,495.33		
266.85	347.14	10,943.82	981.61	195,617.56	1,257.69	9,108.27
	1,250.00		2,569.50	167,429.04		
13,168.21	23,162.12	245,325.53	30,467.84	5,490,132.74	31,013.31	445,092.02
3,032.84	3,824.93	212.88	3,401.61	205,257.05	3,137.39	14,646.65
1,000.00			5,500.00	619,952.17		84,000.00
946.00	241.00	1,284.42	1,759.76	228,633.94	2,197.87	4,903.75
	95.90	249.91	61.92	154,702.19		558.51
				53,693.97		15,522.74
15,496.79	23,894.12	220,636.54	12,510.58	2,846,439.01	28,656.65	373,021.85
33,643.84	51,218.07	467,709.28	53,701.71	9,598,811.07	65,005.22	937,745.52
33,643.84	51,218.07	467,709.28	53,701.71	9,598,811.07	65,005.22	937,745.52
		16,573.22	3,813.01	857,432.08	2,921.59	17,400.00
6.50		10,225.64	642.30	95,069.58	611.20	914.68
		3,088.60				
	128.10	2,737.88	30.00	1,106,946.12	484.51	7,632.51
6.50	128.10	32,625.34	4,485.31	2,059,447.78	4,017.30	25,947.19
15,496.79	23,894.12	220,636.54	12,510.58	2,846,439.01	28,656.65	373,021.85
3,977.97	8,876.38	40,480.10	6,384.69	1,127,260.93	10,474.51	195,125.40
	72.57	622.75	48.46	327,492.58		17,324.34
19,474.76	32,843.07	261,739.39	18,943.73	4,301,192.52	39,131.16	585,471.59
7,500.00	8,000.00	53,459.22	9,186.99	1,726,399.97	5,578.38	109,985.63
				53,693.97		15,522.74
6,662.58	10,246.90	119,885.33	21,085.68	1,458,076.83	16,278.38	200,818.37
14,162.58	18,246.90	173,344.55	30,272.67	3,238,170.77	21,856.76	326,326.74
33,643.84	51,218.07	467,709.28	53,701.71	9,598,811.07	65,005.22	937,745.52
0.0	0.5	13.2	10.9	17.3	11.1	1.9

STATEMENT

Balance Sheets of Electrical Deaprtments of

NIAGARA SYSTEM—Concluded

Municipality	Wyoming	York Twp.	Zurich	NIAGARA SYSTEM SUMMARY
Population	516		P.V.	
ASSETS	$ c.	$ c.	$ c.	$ c.
Lands and buildings				9,263,364.48
Substation equipment				21,656,063.68
Distribution system—overhead	9,464.43	687,470.63	7,207.33	18,685,756.01
Distribution system—underground				5,737,267.21
Line transformers	1,493.02		2,237.83	9,106,649.57
Meters	2,776.05		2,538.35	7,901,897.66
Street light equipment, regular	336.65	50,782.57	471.82	1,954,679.90
Street light equipment, ornamental				1,516,692.62
Miscellaneous construction expense	860.50	16,837.72	265.81	3,650,428.35
Steam or hydraulic plant				24,030.23
Old plant			150.00	4,344,531.45
Total plant	14,930.65	755,090.92	12,871.14	83,841,361.16
Bank and cash balance	1,421.74	190,079.61	1,473.96	2,485,610.34
Securities and investments			4,000.00	3,007,093.06
Accounts receivable	379.87		1,178.92	4,155,920.01
Inventories				1,278,427.36
Sinking fund on local debentures				9,968,222.68
Equity in H-E.P.C. systems	7,763.76	582,715.07	12,379.36	42,131,257.65
Other assets		14,260.21		129,457.99
Total assets	24,496.02	1,542,145.81	31,903.38	146,997,350.25
Deficit				1,443.65
Total	24,496.02	1,542,145.81	31,903.38	146,998,793.90
LIABILITIES				
Debenture balance		187,166.50	2,473.57	25,314,393.64
Accounts payable	724.05		78.45	2,709,129.05
Bank overdraft				86,461.79
Other liabilities	40.00		25.00	2,839,019.84
Total liabilities	764.05	187,166.50	2,577.02	30,949,004.32
RESERVES				
For equity in H-E.P.C. systems	7,763.76	582,715.07	12,379.36	42,131,257.65
For depreciation	4,610.28	243,307.57	6,508.95	19,781,547.49
Other reserves				2,423,935.34
Total reserves	12,374.04	826,022.64	18,888.31	64,336,740.48
SURPLUS				
Debentures paid	9,700.00	302,208.15	3,118.04	27,893,589.53
Local sinking fund				9,968,222.68
Operating surplus	1,657.93	226,748.52	7,320.01	13,851,236.89
Total surplus	11,357.93	528,956.67	10,438.05	51,713,049.10
Total liabilities, reserves and surplus	24,496.02	1,542,145.81	31,903.38	146,998,793.90
Percentage of net debt to total assets	4.6	19.5	13.2	21.0

"A"—Continued

Hydro Municipalities as at December 31, 1939

GEORGIAN BAY SYSTEM

Alliston 1,405	Arthur 1,017	Barrie 8,310	Beaverton 955	Beeton 571	Bradford 989	Brechin P.V.
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
...	...	16,536.84	299.50	...	...	...
675.73	...	15,313.30	...	428.50	388.50	...
28,194.49	17,755.01	65,933.99	24,971.87	11,865.81	20,206.53	1,997.56
...	...	66,437.67	...	...	...	...
7,735.37	4,362.24	43,812.69	8,309.64	2,565.19	4,770.65	1,266.71
7,400.26	4,269.38	47,879.12	6,827.23	2,269.41	4,844.58	741.31
1,549.02	796.21	11,968.72	1,286.94	1,169.54	544.95	248.55
...	...	...	...	...	...	...
2,689.57	316.32	13,564.66	2,464.44	1,573.57	2,041.59	546.92
...	...	...	...	...	...	...
7,846.49	1,086.62	...	3,772.42	...	...	...
56,090.93	28,585.78	281,446.99	47,932.04	19,872.02	32,796.80	4,801.05
5,928.06	2,476.18	...	3,034.50	4,809.62	7,738.23	1,378.59
...	...	...	7,000.00	...	1,000.00	...
1,902.19	385.11	29,919.96	1,332.32	709.84	1,115.01	710.70
17.95	75.00	...	...	...	...	...
...	...	...	...	...	...	...
21,524.64	18,388.91	139,016.26	19,538.37	14,739.04	17,087.18	7,358.03
552.74	310.00	9,761.86	69.83	...	47.65	...
86,016.51	50,220.98	460,145.07	78,907.06	40,130.52	59,784.87	14,248.37
...	9,974.06	...	...	...	...	...
86,016.51	60,195.04	460,145.07	78,907.06	40,130.52	59,784.87	14,248.37
15,578.24	12,333.26	12,946.95	2,706.72	6,935.61	11,970.83	1,434.53
89.69	...	21,337.16	197.68	54.17	560.67	...
...	...	4,163.93	...	...	...	...
32.70	310.00	4,178.62	549.59	...	165.00	14.85
15,700.63	12,643.26	42,626.66	3,453.99	6,989.78	12,696.50	1,449.38
21,524.64	18,388.91	139,016.26	19,538.37	14,739.04	17,087.18	7,358.03
19,041.31	16,496.13	92,097.92	15,099.85	9,610.51	12,655.97	2,190.47
75.00	...	4,823.41	209.62	278.90	125.00	50.00
40,640.95	34,885.04	235,937.59	34,847.84	24,628.45	29,868.15	9,598.50
24,421.76	12,666.74	52,418.73	12,293.28	8,064.39	13,229.17	1,776.39
...	...	...	...	...	...	...
5,253.17	...	129,162.09	28,311.95	447.90	3,991.05	1,424.10
29,674.93	12,666.74	181,580.82	40,605.23	8,512.29	17,220.22	3,200.49
86,016.51	60,195.04	460,145.07	78,907.06	40,130.52	59,784.87	14,248.37
24.3	39.7	13.3	5.8	27.5	29.7	21.0

STATEMENT

Balance Sheets of Electrical Departments of

GEORGIAN BAY SYSTEM—Continued

Municipality Population	Cannington 756	Chatsworth 337	Chesley 1,743	Coldwater 612	Collingwood 5,322
ASSETS	$ c.	$ c.	$ c.	$ c.	$ c.
Lands and buildings		364.89	6,000.00	275.00	15,950.08
Substation equipment			2,305.58		11,203.24
Distribution system—overhead	11,604.10	5,271.55	21,188.95	9,184.80	51,179.45
Distribution system—underground					
Line transformers	4,487.88	1,939.05	7,311.13	3,239.61	19,161.96
Meters	4,876.84	1,750.05	7,391.35	3,073.91	23,527.16
Street light equipment, regular	988.37	529.17	1,441.82	775.02	2,789.26
Street light equipment, ornamental					
Miscellaneous construction expense	636.63	513.41	3,658.48	279.44	2,151.91
Steam or hydraulic plant					
Old plant	3,609.37				
Total plant	26,203.19	10,368.12	49,297.31	16,827.78	125,963.06
Bank and cash balance	2,157.07	2,350.96	15.00	106.44	2,354.64
Securities and investments	1,000.00		5,000.00	4,000.00	24,000.00
Accounts receivable	740.23	835.14	516.91	2,298.44	4,736.76
Inventories	233.19		373.59		51.58
Sinking fund on local debentures					
Equity in H-E.P.C. systems	14,748.50	4,130.36	33,894.05	14,314.12	128,589.15
Other assets	415.66		524.59	86.35	
Total assets	45,497.84	17,684.58	89,621.45	37,633.13	285,695.19
Deficit					
Total	45,497.84	17,684.58	89,621.45	37,633.13	285,695.19
LIABILITIES					
Debenture balance	3,525.94			1,688.13	
Accounts payable	132.09	365.50	505.65	16.95	418.98
Bank overdraft			671.64		
Other liabilities	49.00	102.13		214.87	2,134.08
Total liabilities	3,707.03	467.63	1,177.29	1,919.95	2,553.06
RESERVES					
For equity in H-E.P.C. systems	14,748.50	4,130.36	33,894.05	14,314.12	128,589.15
For depreciation	11,579.02	3,528.13	19,789.24	9,762.12	59,539.90
Other reserves	131.13			54.56	312.82
Total reserves	26,458.65	7,658.49	53,683.29	24,130.80	188,441.87
SURPLUS					
Debentures paid	11,474.06	5,400.00	27,500.00	5,311.87	38,183.42
Local sinking fund					
Operating surplus	3,858.10	4,158.46	7,260.87	6,270.51	56,516.84
Total surplus	15,332.16	9,558.46	34,760.87	11,582.38	94,700.26
Total liabilities, reserves and surplus	45,497.84	17,684.58	89,621.45	37,633.13	285,695.19
Percentage of net debt to total assets	12.1	3.5	2.1	8.2	1.6

"A"—Continued

Hydro Municipalities as at December 31, 1939

Cookstown	Creemore	Dundalk	Durham	Elmvale	Elmwood	Flesherton
P.V.	615	700	1,864	P.V.	P.V.	455
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
70.00			56.59	106.25		408.78
392.95			546.02	2,273.07		
9,674.04	7,644.47	8,515.79	22,847.15	9,963.26	5,121.63	5,938.38
2,512.10	3,676.20	4,041.90	8,344.09	4,517.64	1,100.67	2,454.59
2,321.91	3,262.37	2,926.54	7,755.02	3,887.98	1,219.59	2,416.65
902.02	358.56	1,203.31	1,545.06	447.17	342.71	737.26
1,535.19	9.38	292.57	1,507.85	514.44	1,093.62	1,028.29
			2,091.39			
17,408.21	14,950.98	16,980.11	44,693.17	21,709.81	8,878.22	12,983.95
3,554.28	2,261.34	2,830.40	3,516.12	2,756.83	385.74	1,321.05
3,000.00	3,000.00	3,000.00	7,000.00	2,500.00	3,000.00	4,000.00
794.82	703.68	103.62	745.68	244.62	75.00	447.02
		6.50	841.12			
4,999.26	11,216.30	11,672.06	29,403.83	14,371.66	3,838.93	6,274.28
			51.85	117.40		
29,756.57	32,132.30	34,592.69	86,251.77	41,700.32	16,177.89	25,026.30
29,756.57	32,132.30	34,592.69	86,251.77	41,700.32	16,177.89	25,026.30
4,428.21				1,240.02		1,914.70
1.00	47.19	292.85	22.41	97.63	15.17	1,022.04
50.00	220.00			70.63		
4,479.21	267.19	292.85	22.41	1,408.28	15.17	2,936.74
4,999.26	11,216.30	11,672.06	29,403.83	14,371.66	3,838.93	6,274.28
7,963.27	5,711.51	6,270.26	14,819.43	10,052.42	2,927.90	4,095.70
				50.00		345.24
12,962.53	16,927.81	17,942.32	44,223.26	24,474.08	6,766.83	10,715.22
9,071.79	2,823.61	5,955.96	25,800.00	5,759.98	7,200.00	4,785.30
3,243.04	12,113.69	10,401.56	16,206.10	10,057.98	2,195.89	6,589.04
12,314.83	14,937.30	16,357.52	42,006.10	15,817.96	9,395.89	11,374.34
29,756.57	32,132.30	34,592.69	86,251.77	41,700.32	16,177.89	25,026.30
18.1	1.3	1.3	0.0	5.2	0.1	15.7

STATEMENT

Balance Sheets of Electrical Departments of

GEORGIAN BAY SYSTEM—Continued

Municipality	Grand Valley	Gravenhurst	Hanover	Holstein	Huntsville
Population	605	2,135	3,215	P.V.	2,770
ASSETS	$ c.	$ c.	$ c.	$ c.	$ c.
Lands and buildings	36.50	10,072.27	3,001.32		353.52
Substation equipment		10,986.03	9,271.19		647.30
Distribution system—overhead	11,540.48	36,366.04	50,524.87	2,206.85	21,793.54
Distribution system—underground		1,941.77			
Line transformers	2,179.63	14,158.11	20,396.84	685.79	11,126.34
Meters	3,336.31	12,377.55	17,304.95	666.48	12,383.56
Street light equipment, regular	987.12	4,472.25	2,350.30	170.44	7,361.53
Street light equipment, ornamental					
Miscellaneous construction expense	219.74	2,833.21	6,614.91	188.31	983.31
Steam or hydraulic plant					
Old plant		18,130.29	2,370.91		5,156.20
Total plant	18,299.78	111,337.52	111,835.29	3,917.87	59,805.30
Bank and cash balance	2,366.97	4,276.63	1,025.67	918.48	3,504.11
Securities and investments	5,128.60		30,676.80	1,500.00	10,074.18
Accounts receivable	216.27	2,533.02	3,166.84	130.35	1,191.72
Inventories		771.63	216.29		2,855.83
Sinking fund on local debentures					
Equity in H-E.P.C. systems	11,408.41	25,902.27	76,985.29	2,543.47	54,729.86
Other assets		517.80	556.38		
Total assets	37,420.03	145,338.87	224,462.56	9,010.17	132,161.00
Deficit					
Total	37,420.03	145,338.87	224,462.56	9,010.17	132,161.00
LIABILITIES					
Debenture balance			3,792.14		
Accounts payable	1,506.90	13,712.21	1,258.13		3,169.72
Bank overdraft					
Other liabilities		662.50	19.00		925.07
Total liabilities	1,506.90	14,374.71	5,069.27		4,094.79
RESERVES					
For equity in H-E.P.C. systems	11,408.41	25,902.27	76,985.29	2,543.47	54,729.86
For depreciation	8,565.44	24,846.40	56,086.81	1,750.55	13,151.12
Other reserves		784.48			3,631.38
Total reserves	19,973.85	51,533.15	133,072.10	4,294.02	71,512.36
SURPLUS					
Debentures paid	11,000.00	63,968.41	83,707.86	2,762.05	21,133.54
Local sinking fund					
Operating surplus	4,939.28	15,462.60	2,613.33	1,954.10	35,420.31
Total surplus	15,939.28	79,431.01	86,321.19	4,716.15	56,553.85
Total liabilities, reserves and surplus	37,420.03	145,338.87	224,462.56	9,010.17	132,161.00
Percentage of net debt to total assets	5.8	12.0	3.4	0.0	5.3

"A"—Continued

Hydro Municipalities as at December 31, 1939

Kincardine 2,464	Kirkfield P.V.	Lucknow 1,034	Markdale 781	Meaford 2,811	Midland 6,669	Mildmay 754
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
6,531.80	....	....	....	1,144.18	19,983.57	....
2,794.20	....	....	780.80	3,849.47	85,138.20	....
44,125.02	5,157.99	18,236.99	10,710.31	32,666.95	96,272.90	6,103.22
....	....	....	....	....	....	....
12,513.87	557.90	5,825.72	5,216.12	8,489.97	26,366.59	1,657.05
12,029.22	737.11	5,146.65	4,183.85	8,788.05	39,112.61	2,926.73
6,016.81	379.00	1,475.15	1,390.15	3,307.87	19,278.84	561.88
....	....	....	....	....	....	....
5,124.80	234.11	2,342.39	613.15	2,602.12	4,189.36	881.42
....	....		....	....		....
....	....	....	2,080.65	3,452.38	....	849.00
89,135.72	7,066.11	33,026.90	24,975.03	64,300.99	290,342.07	12,979.30
6,061.80	137.94	3,554.67	1,213.85	1,029.93	11,198.69	1,757.41
....	....	3,000.00	4,255.13	15,000.00	40,932.13	2,500.00
3,047.84	375.86	1,625.72	541.56	778.18	4,013.46	482.70
1,552.57	....	....	....	....	2,862.66	....
....	....	....	....	....	....	....
38,944.47	3,014.96	18,117.63	9,518.46	27,196.13	205,145.99	2,562.23
620.24	....	....	....	....	820.91	298.75
139,362.64	10,594.87	59,324.92	40,504.03	108,305.23	555,315.91	20,580.39
....	1,863.14	....	....	....	....	....
139,362.64	12,458.01	59,324.92	40,504.03	108,305.23	555,315.91	20,580.39
7,805.21	....	3,745.77	3,215.76	18,065.06	....	9,408.14
15.38	31.77	1,246.90	676.34	97.73	1,621.16	....
....	....	....	....	....	....	....
....	....	....	22.00	1,129.26	855.03	....
7,820.59	31.77	4,992.67	3,914.10	19,292.05	2,476.19	9,408.14
38,944.47	3,014.96	18,117.63	9,518.46	27,196.13	205,145.99	2,562.23
29,463.23	3,336.28	8,971.49	7,689.23	14,066.93	169,666.88	1,681.00
177.29	75.00	....	....	55.12	2,151.72	....
68,584.99	6,426.24	27,089.12	17,207.69	41,318.18	376,964.59	4,243.23
56,394.79	6,000.00	15,977.59	5,784.24	31,295.14	111,944.99	2,895.36
....	....	....	....	....	....	....
6,562.27	....	11,265.54	13,598.00	16,399.86	63,930.14	4,033.66
62,957.06	6,000.00	27,243.13	19,382.24	47,695.00	175,875.13	6,929.02
139,362.64	12,458.01	59,324.92	40,504.03	108,305.23	555,315.91	20,580.39
7.8	0.4	12.1	12.6	23.8	0.7	52.2

STATEMENT

Balance Sheets of Electrical Departments of

GEORGIAN BAY SYSTEM—Continued

Municipality Population	Mount Forest 1,840	Neustadt 455	Orangeville 2,660	Owen Sound 13,411	Paisley 729
Assets					
Lands and buildings	3,725.00	....	2,585.07	26,266.33	....
Substation equipment	686.75	....	1,169.00	15,131.59	1,923.46
Distribution system—overhead	23,224.98	10,388.49	35,084.16	112,893.32	11,789.96
Distribution system—underground	....	....	....	....	....
Line transformers	7,581.19	4,146.92	9,469.03	52,279.61	1,738.46
Meters	8,318.04	2,368.43	13,368.06	61,279.57	3,252.07
Street light equipment, regular	2,397.89	496.41	7,532.55	30,426.80	1,045.51
Street light equipment, ornamental	....	....	....	....	....
Miscellaneous construction expense	2,156.84	1,506.10	6,448.82	3,259.51	757.60
Steam or hydraulic plant	....	....	....	33,282.00	....
Old plant	3,810.95	1,097.60	3,204.99	....	1,745.00
Total plant	51,901.64	20,003.95	78,861.68	334,818.73	22,252.06
Bank and cash balance	1,238.52	3,465.65	1,538.90	100.00	3,554.90
Securities and investments	4,000.00	2,000.00	11,500.00	27,000.00	2,000.00
Accounts receivable	497.59	301.38	988.05	10,040.39	620.41
Inventories	18.00	22.39	287.61	11,063.98	....
Sinking fund on local debentures	....	....	....	....	....
Equity in H-E.P.C. systems	30,104.10	6,184.85	41,006.49	192,476.02	10,230.99
Other assets	....	....	507.40	....	....
Total assets	87,759.85	31,978.22	134,690.13	575,499.12	38,658.36
Deficit	....	1,212.09	....	....	....
Total	87,759.85	33,190.31	134,690.13	575,499.12	38,658.36
Liabilities					
Debenture balance	7,106.95	493.60	88.91	....	4,692.96
Accounts payable	1,500.00	5.80	482.66	3,289.43	....
Bank overdraft	....	....	....	664.50	....
Other liabilities	....	10.00	23.25	4,990.18	41.27
Total liabilities	8,606.95	509.40	594.82	8,944.11	4,734.23
Reserves					
For equity in H-E.P.C. systems	30,104.10	6,184.85	41,006.49	192,476.02	10,230.99
For depreciation	20,317.88	9,989.66	27,170.92	76,371.89	6,082.17
Other reserves	....	....	....	10,922.95	....
Total reserves	50,421.98	16,174.51	68,177.41	279,770.86	16,313.16
Surplus					
Debentures paid	23,851.65	16,506.40	35,811.09	141,000.00	11,307.04
Local sinking fund	....	....	....	....	....
Operating surplus	4,879.27	....	30,106.81	145,784.15	6,303.93
Total surplus	28,730.92	16,506.40	65,917.90	286,784.15	17,610.97
Total liabilities, reserves and surplus	87,759.85	33,190.31	134,690.13	575,499.12	38,658.36
Percentage of net debt to total assets	14.9	2.0	0.6	2.3	16.7

"A"—Continued

Hydro Municipalities as at December 31, 1939

Penetanguishene 4,094	Port Elgin 1,321	Port McNicoll 905	Port Perry 1,128	Priceville P.V.	Ripley 442	Rosseau 305
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
2,288.05	111.25	369.08	....	68.00	....	....
7,106.39	....	....	2,564.65	....	....	....
48,841.21	27,232.00	9,449.58	19,823.99	5,242.18	10,037.32	7,482.82
....	....	....	....	....	....	....
19,892.83	6,966.57	1,400.23	5,099.65	802.15	3,693.93	2,204.63
14,270.90	7,450.10	2,866.00	4,583.85	470.60	1,799.86	1,202.64
3,829.44	2,270.59	652.98	1,695.79	256.88	844.33	623.60
....	....	....	....	....	....	....
1,173.74	421.66	747.79	145.69	833.90	1,219.84	1,281.68
....	....	....	....	....	....	....
....	4,213.00	....	....	....	....	....
97,402.56	48,665.17	15,485.66	33,913.62	7,673.71	17,595.28	12,795.37
2,253.31	3,665.48	1,033.78	....	817.55	3,407.87	1,571.87
872.14	10,000.00	....	9,000.00	....	....	....
5,109.08	306.41	95.83	924.80	.31	377.15	198.57
59.46	....	....	....	....	....	....
....	....	....	....	....	....	....
59,394.22	9,383.85	5,909.15	16,014.89	896.73	7,147.33	3,033.30
68.59	388.13	....	....	....	....	....
165,159.36	72,409.04	22,524.42	59,853.31	9,388.30	28,527.63	17,599.11
....	....	....	....	1,289.59	....	398.42
165,159.36	72,409.04	22,524.42	59,853.31	10,677.89	28,527.63	17,997.53
3,849.17	27,994.01	380.40	9,434.39	493.60	7,566.49	10,534.93
261.33	4,024.59	59.82	....	99.50	41.47	....
....	....	....	355.79	....	....	....
481.75	....	108.40	622.00	....	228.83	30.00
4,592.25	32,018.60	548.62	10,412.18	593.10	7,836.79	10,564.93
59,394.22	9,383.85	5,909.15	16,014.89	896.73	7,147.33	3,033.30
40,288.08	7,622.48	5,109.50	10,065.92	2,681.66	5,931.81	1,934.23
1,600.00	....	....	....	....	....	.
101,282.30	17,006.33	11,018.65	26,080.81	3,578.39	13,079.14	4,967.53
33,133.78	14,005.99	6,919.60	10,447.27	6,506.40	6,405.45	2,465.07
....	....	....	....	....	....	....
26,151.03	9,378.12	4,037.55	12,913.05	....	1,206.25	....
59,284.81	23,384.11	10,957.15	23,360.32	6,506.40	7,611.70	2,465.07
165,159.36	72,409.04	22,524.42	59,853.31	10,677.89	28,527.63	17,997.53
4.3	58.0	3.3	23.7	7.0	36.7	72.5

STATEMENT

Balance Sheets of Electrical Deaprtments of

GEORGIAN BAY SYSTEM—Continued

Municipality	Shelburne	Southampton	Stayner	Sunderland P.V.	Tara
Population	1,043	1,441	1,043		474
ASSETS	$ c.	$ c.	$ c.	$ c.	$ c.
Lands and buildings	800.00	25.00			
Substation equipment	566.60		200.00		
Distribution system—overhead	15,029.39	26,056.80	15,917.42	4,284.74	11,308.58
Distribution system—underground					
Line transformers	6,723.62	7,377.19	6,272.61	1,677.23	2,752.91
Meters	6,673.45	8,995.98	6,474.32	2,259.63	1,901.43
Street light equipment, regular	1,104.49	2,534.08	1,017.64	627.74	2,721.65
Street light equipment, ornamental					
Miscellaneous construction expense	2,226.98	661.75	415.88	175.82	1,415.89
Steam or hydraulic plant					
Old plant	739.50	2,477.00		2,030.00	
Total plant	33,864.03	48,127.80	30,297.87	11,055.16	20,100.46
Bank and cash balance	508.70	1,009.47	1,014.46	1,501.68	3,649.43
Securities and investments	7,500.00	1,000.00	4,000.00		
Accounts receivable	279.56	354.37	596.55	461.61	30.00
Inventories					
Sinking fund on local debentures					
Equity in H-E.P.C. systems	17,888.79	8,231.17	15,424.17	9,723.53	7,936.73
Other assets	135.00	225.02		76.12	
Total assets	60,176.08	58,947.83	51,333.05	22,818.10	31,716.62
Deficit					224.46
Total	60,176.08	58,947.83	51,333.05	22,818.10	31,941.08
LIABILITIES					
Debenture balance		14,784.22			634.59
Accounts payable	271.77	321.09	155.66	26.14	68.62
Bank overdraft					
Other liabilities	61.45	11.84	235.00	5.00	
Total liabilities	333.22	15,117.15	390.66	31.14	703.21
RESERVES					
For equity in H-E.P.C. systems	17,888.79	8,231.17	15,424.17	9,723.53	7,936.73
For depreciation	15,367.09	5,384.38	12,749.26	5,113.44	8,435.73
Other reserves			49.46		
Total reserves	33,255.88	13,615.55	28,222.89	14,836.97	16,372.46
SURPLUS					
Debentures paid	19,920.00	18,215.71	9,867.59	6,800.00	14,865.41
Local sinking fund					
Operating surplus	6,666.98	11,999.42	12,851.91	1,149.99	
Total surplus	26,586.98	30,215.13	22,719.50	7,949.99	14,865.41
Total liabilities, reserves and surplus	60,176.08	58,947.83	51,333.05	22,818.10	31,941.08
Percentage of net debt to total assets	0.1	29.8	1.1	0.2	2.9

"A"—Continued

Hydro Municipalities as at December 31, 1939

Teeswater 842	Thornton P.V.	Tottenham 557	Uxbridge 1,509	Victoria Harbour 1,023	Walkerton 2,463	Waubaushene P.V.
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
			40.00			
330.31		358.50	2,657.65			
17,720.49	6,508.60	8,880.25	15,278.98	10,100.82	42,078.04	9,674.61
5,362.15	1,015.06	1,376.38	4,876.02	1,975.97	13,173.21	2,673.79
3,799.38	950.63	2,474.09	5,601.03	3,273.10	12,113.73	2,997.92
1,488.82	433.25	466.26	1,489.77	366.32	2,548.25	303.35
		1,342.62				
1,829.49	300.35		1,144.43	655.30	3,327.82	321.89
4,976.86		286.45			4,897.60	
35,507.50	9,207.89	15,184.55	31,087.88	16,371.51	78,138.65	15,971.56
602.72	778.41	1,056.06	2,024.56	2,845.82	5,504.12	295.54
2,500.00						
1,073.31	943.61	678.98	897.83	851.10	3,237.63	526.35
			8.27		1,204.50	
11,442.03	3,148.78	9,976.30	16,923.98	6,144.18	15,364.99	3,983.36
			205.56			
51,125.56	14,078.69	26,895.89	51,148.08	26,212.61	103,449.89	20,776.81
	2,455.61	3,028.55				
51,125.56	16,534.30	29,924.44	51,148.08	26,212.61	103,449.89	20,776.81
3,635.14	246.82	4,855.70			44,806.25	
.02	107.38	111.35	219.53	574.32	545.63	1,267.49
39.00		276.00	282.00		174.00	
3,674.16	354.20	5,243.05	501.53	574.32	45,525.88	1,267.49
11,442.03	3,148.78	9,976.30	16,923.98	6,144.18	15,364.99	3,983.36
8,817.48	5,778.14	6,558.85	7,735.85	5,987.89	9,329.08	2,716.51
		34.84	59.80		139.57	125.00
20,259.51	8,926.92	16,569.99	24,719.63	12,132.07	24,833.64	6,824.87
24,364.86	7,253.18	8,111.40	16,207.59	6,500.00	18,193.75	3,500.00
2,827.03			9,719.33	7,006.22	14,896.62	9,184.45
27,191.89	7,253.18	8,111.40	25,926.92	13,506.22	33,090.37	12,684.45
51,125.56	16,534.30	29,924.44	51,148.08	26,212.61	103,449.89	20,776.81
9.3	2.6	30.9	1.5	2.9	51.7	7.5

STATEMENT

Balance Sheets of Electrical Departments of

GEORGIAN BAY SYSTEM—Concluded

Municipality	Wiarton	Windermere	Wingham	Woodville	GEORGIAN BAY SYSTEM SUMMARY
Population	1,723	118	2,123	421	
ASSETS	$ c.	$ c.	$ c.	$ c.	$ c.
Lands and buildings	200.00	....	21,513.45	....	139,182.32
Substation equipment	....	....	4,863.91	....	184,552.89
Distribution system—overhead	21,477.67	9,543.60	40,549.75	3,377.01	1,254,040.75
Distribution system—underground	....	....	....	....	68,379.44
Line transformers	5,520.77	3,386.95	17,493.49	1,995.54	443,711.33
Meters	6,474.13	1,130.07	16,028.72	2,315.99	462,327.45
Street light equipment, regular	2,781.34	247.26	9,782.66	521.83	157,882.48
Street light equipment, ornamental	....	....	....	....	1,342.62
Miscellaneous construction expense	6,111.60	525.65	4,725.53	285.51	107,322.17
Steam or hydraulic plant	....	....	14,711.99	....	47,993.99
Old plant	2,001.79	....	12,320.02	2,182.50	96,428.98
Total plant	44,567.30	14,833.53	141,989.52	10,678.38	2,963,164.42
Bank and cash balance	432.93	1,776.80	....	202.61	131,872.34
Securities and investments	15,000.00	....	4,000.00	5,000.00	285,938.98
Accounts receivable	2,012.33	337.49	5,377.43	1,997.53	105,536.22
Inventories	....	....	5,925.78	....	28,447.90
Sinking fund on local debentures	....	....	....	....	....
Equity in H-E.P.C. systems	12,034.56	2,131.23	33,661.61	9,506.14	1.556,477.57
Other assets	....	....	70.40	....	16,428.23
Total assets	74,047.12	19,079.05	191,024.74	27,384.66	5,087,865.66
Deficit	....	....	....	....	20,445.92
Total	74,047.12	19,079.05	191,024.74	27,384.66	5,108,311.58
LIABILITIES					
Debenture balance	28,190.84	9,014.89	25,370.38	1,173.90	328,083.36
Accounts payable	2,486.55	10.75	86.11	459.79	64,989.87
Bank overdraft	....	....	1,685.07	....	7,540.93
Other liabilities	105.00	....	617.50	....	20,046.80
Total liabilities	30,782.39	9,025.64	27,759.06	1,633.69	420,660.96
RESERVES					
For equity in H-E.P.C. systems	12,034.56	2,131.23	33,661.61	9,506.14	1,556,477.57
For depreciation	5,557.82	2,624.11	36,000.11	2,898.04	1,017,126.40
Other reserves	46.30	....	....	800.00	27,108.59
	17,638.68	4,755.34	69,661.72	13,204.18	2,600,712.56
SURPLUS					
Debentures paid	9,209.16	2,748.41	70,735.12	4,326.10	1,236,178.44
Local sinking fund	....	....	....	....	....
Operating surplus	16,416.89	2,549.66	22,868.84	8,220.69	850.759.62
Total surplus	25,626.05	5,298.07	93,603.96	12,546.79	2,086,938.06
Total liabilities, reserves and surplus	74,047.12	19,079.05	191,024.74	27,384.66	5,108,311.58
Percentage of net debt to total assets	49.6	53.3	17.6	9.1	11.9

"A"—Continued

Hydro Municipalities as at December 31, 1939

EASTERN ONTARIO SYSTEM

Alexandria 1,971	Apple Hill P.V.	Arnprior 4,059	Athens 670	Bath 343	Belleville 14,589	Bloomfield 653
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
202.00	169.06	....	....	....	41,953.62	....
....	....	....	....	....	76,540.24	410.00
28,763.14	3,009.09	26,626.99	14,322.22	6,324.02	123,240.80	11,086.59
....	....	....	....	....	....	....
8,847.70	1,288.37	9,728.22	2,401.06	1,376.40	33,161.29	2,251.13
7,663.31	1,234.61	13,713.50	3,204.77	828.49	63,148.96	3,126.51
2,233.59	421.12	6,061.40	698.90	554.37	23,319.45	1,030.14
....	....	....	....	....	....	....
5,191.31	257.43	757.80	1,175.77	727.38	7,123.39	1,403.42
....	....	....	....	....	....	....
4,466.89	709.55	....	....	....	....	....
57,367.94	7,089.23	56,887.91	21,802.72	9,810.66	368,487.75	19,307.79
2,202.29	1,869.60	5,387.78	308.62	69.12	23,623.49	2,616.91
10,000.00	....	....	3,500.00	....	5,000.00	....
5,381.74	284.84	5,057.85	2,161.95	41.10	29,018.98	525.00
....	....	337.43	....	....	9,033.67	....
....	....	....	....	....	....	....
28,672.32	3,064.15	1,691.56	5,593.78	1,842.44	153,210.16	5,574.01
....	....	....	....	....	....	....
103,624.29	12,307.82	69,362.53	33,367.07	11,763.32	588,374.05	28,023.71
....	....	....	....	....	....	....
103,624.29	12,307.82	69,362.53	33,367.07	11,763.32	588,374.05	28,023.71
3,291.21	1,101.38	53,730.87	8,144.52	5,721.85	....	4,216.40
355.45	207.33	3,899.28	....	740.70	15,787.52	13.79
....	....	....	....	....	....	....
247.51	....	1,615.59	....	80.00	8,382.85	103.00
3,894.17	1,308.71	59,245.74	8,144.52	6,542.55	24,170.37	4,333.19
28,672.32	3,064.15	1,691.56	5,593.78	1,842.44	153,210.16	5,574.01
19,235.42	2,436.26	1,105.00	4,616.29	1,518.00	47,943.61	6,019.86
567.98	....	....	206.06	....	1,936.78	....
48,475.72	5,500.41	2,796.56	10,416.13	3,360.44	203,090.55	11,593.87
44,842.63	4,898.62	1,769.13	5,855.48	1,778.15	176,000.00	6,983.60
....	....	....	....	....	....	....
6,411.77	600.08	5,551.10	8,950.94	82.18	185,113.13	5,113.05
51,254.40	5,498.70	7,320.23	14,806.42	1,860.33	361,113.13	12,096.65
103,624.29	12,307.82	69,362.53	33,367.07	11,763.32	588,374.05	28,023.71
5.2	14.2	87.5	29.3	65.9	5.6	19.3

STATEMENT

Balance Sheets of Electrical Departments of

EASTERN ONTARIO SYSTEM—Continued

Municipality	Bowmanville	Brighton	Brockville	Cardinal	Carleton Place
Population	3,850	1,454	9,995	1,556	4,278
ASSETS	$ c.	$ c.	$ c.	$ c.	$ c.
Lands and buildings	28,628.36	600.00	45,295.14	....	13,390.32
Substation equipment	894.47	....	39,186.90	....	2,471.63
Distribution system—overhead	49,769.58	16,564.11	98,736.71	13,903.40	45,883.07
Distribution system—underground	....	....	....	....	....
Line transformers	10,404.03	5,875.08	47,631.75	3,565.27	13,061.37
Meters	19,343.96	7,821.24	49,958.70	3,538.89	18,144.38
Street light equipment, regular	7,996.09	1,189.99	26,981.23	491.85	6,691.85
Street light equipment, ornamental	....	....	....	....	....
Miscellaneous construction expense	4,000.15	768.71	2,663.53	783.32	4,992.83
Steam or hydraulic plant	....	....	46,965.86	....	....
Old plant	....	....	4,821.76	3,474.80	5,289.19
Total plant	121,036.64	32,819.13	362,241.58	25,757.53	109,924.64
Bank and cash balance	7,116.54	1,616.86	....	729.59	4,563.86
Securities and investments	....	....	103,000.00	3,000.00	20,000.00
Accounts receivable	6,463.33	3,252.20	4,536.32	183.24	5,092.92
Inventories	4,709.17	5,901.32	3,005.12	....	1,522.59
Sinking fund on local debentures	....	....	....	....	....
Equity in H-E.P.C. systems	51,505.31	10,049.11	158,514.71	4,741.76	72,809.01
Other assets	....	....	....	....	....
Total assets	190,830.99	53,638.62	631,297.73	34,412.12	213,913.02
Deficit	....	....	....	....	....
Total	190,830.99	53,638.62	631,297.73	34,412.12	213,913.02
LIABILITIES					
Debenture balance	17,570.01	12,863.68	....	9,397.95	25,824.61
Accounts payable	....	40.95	4,072.48	356.57	8.01
Bank overdraft	....	....	5,151.84	....	....
Other liabilities	1,347.97	212.78	47.40	....	1,244.54
Total liabilities	18,917.98	13,117.41	9,271.72	9,754.52	27,077.16
RESERVES					
For equity in H-E.P.C. systems	51,505.51	10,049.11	158,514.71	4,741.76	72,809.01
For depreciation	13,563.21	3,778.03	120,121.65	2,414.54	15,053.68
Other reserves	....	631.92	15,166.52	100.00	1,188.04
Total reserves	65,068.52	14,459.06	293,802.88	7,256.30	89,050.73
SURPLUS					
Debentures paid	53,429.99	12,136.32	226,657.54	5,602.05	40,175.39
Local sinking fund	....	....	....	....	....
Operating surplus	53,414.50	13,925.83	101,565.59	11,799.25	57,609.74
Total surplus	106,844.49	26,062.15	328,223.13	17,401.30	97,785.13
Total liabilities, reserves and surplus	190,830.99	53,638.62	631,297.73	34,412.12	213,913.02
Percentage of net debt to total assets	13.6	30.1	2.0	32.9	19.2

"A"—Continued

Hydro Municipalities as at December 31, 1939

Chesterville	Cobden	Cobourg	Colborne	Deseronto	Finch	Hastings	Havelock
1,083	627	5,307	955	1,300	337	757	1,147
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
335.00		29,949.68		597.41			
		1,668.35		161.18			572.90
10,641.61	3,995.49	79,879.53	10,748.74	10,729.59	7,894.54	17,349.21	19,831.40
4,008.10	1,006.51	26,250.40	1,117.89	1,702.57	2,159.77	2,817.85	2,906.31
5,022.41	925.97	31,025.48	2,535.60	4,987.60	1,946.87	3,409.78	5,629.95
593.64	444.46	12,757.94	1,457.63	432.60	504.07	1,283.74	1,883.33
960.16	45.86	5,872.79	3,538.00	410.46	100.96	728.74	4,596.41
	2,853.85					1,733.13	2,420.45
21,560.92	9,272.14	187,404.17	19,397.86	19,021.41	12,606.21	27,322.45	37,840.75
	3,012.61	3,342.70	1,528.15	119.25	1,055.74		3,139.48
9,000.00			3,500.00		3,000.00	4,500.00	10,000.00
1,902.93	725.21	11,666.94	340.80	1,465.59	322.26	896.77	474.08
863.85		4,237.71	1,177.98	763.82			
25,609.93	926.93	38,418.95	3,249.59	6,195.20	3,899.58	3,210.32	11,113.89
		3,714.05					
58,937.63	13,936.89	248,784.52	29,194.38	27,565.27	20,883.79	35,929.54	62,568.20
58,937.63	13,936.89	248,784.52	29,194.38	27,565.27	20,883.79	35,929.54	62,568.20
	5,369.20	78,304.67	9,758.05	1,382.35	3,789.77	15,145.03	3,309.24
810.77	15.32	6,347.05	419.11	61.57		273.98	
758.84						12.68	
	117.50	8,138.63	230.00	282.12	50.00	218.00	
1,569.61	5,502.02	92,790.35	10,407.16	1,726.04	3,839.77	15,649.69	3,309.24
25,609.93	926.93	38,418.95	3,249.59	6,195.20	3,899.58	3,210.32	11,113.89
6,927.07	503.29	22,460.21	1,997.13	3,403.92	2,334.06	3,583.29	11,489.62
		200.00			10.59		
32,537.00	1,430.22	61,079.16	5,246.72	9,599.12	6,244.23	6,793.61	22,603.51
6,500.00	2,434.07	27,688.83	2,436.54	13,617.65	3,210.23	5,854.97	29,590.76
18,331.02	4,570.58	67,226.18	11,103.96	2,622.46	7,589.56	7,631.27	7,064.69
24,831.02	7,004.65	94,915.01	13,540.50	16,240.11	10,799.79	13,486.24	36,655.45
58,937.63	13,936.89	248,784.52	29,194.38	27,565.27	20,883.79	35,929.54	62,568.20
4.7	42.3	44.1	40.1	8.1	22.6	47.8	6.4

STATEMENT

Balance Sheets of Electrical Departments of

EASTERN ONTARIO SYSTEM—Continued

Municipality	Kemptville	Kingston	Lakefield	Lanark	Lancaster
Population	1,218	23,355	1,308	723	511
ASSETS	$ c.	$ c.	$ c.	$ c.	$ c.
Lands and buildings	3,422.88	220,850.00	3,137.97		
Substation equipment		227,194.61			
Distribution system—overhead	20,812.21	183,190.76	22,282.95	6,852.91	6,573.46
Distribution system—underground		186,353.58			
Line transformers	6,435.41	70,435.49	5,993.32	1,494.69	1,044.32
Meters	7,445.00	115,433.09	7,575.66	2,049.29	1,805.63
Street light equipment, regular	1,090.07	75,891.49	1,876.05	747.54	650.65
Street light equipment, ornamental					
Miscellaneous construction expense	5,948.36	51,045.44	3,773.10	322.37	1,068.55
Steam or hydraulic plant		17,670.80			
Old plant			3,445.25		
Total plant	45,153.93	1,148,065.26	48,084.30	11,466.80	11,142.61
Bank and cash balance	131.11	35,636.53	8,156.09	3,050.84	4,397.61
Securities and investments	20,000.00	111,175.00	3,000.00	1,982.05	
Accounts receivable	1,468.40	31,622.56	571.36	172.03	889.04
Inventories	471.94	15,669.20			
Sinking fund on local debentures		22,247.07			
Equity in H-E.P.C. systems	18,996.04	41,282.87	11,662.35	5,725.54	5,745.83
Other assets		2,296.87			
Total assets	86,221.42	1,407,995.36	71,474.10	22,397.26	22,175.09
Deficit					
Total	86,221.42	1,407,995.36	71,474.10	22,397.26	22,175.09
LIABILITIES					
Debenture balance	14,324.38	52,735.00	19,725.15		
Accounts payable	116.69	9,040.45			708.91
Bank overdraft					
Other liabilities	12.00	7,423.54	652.70	50.00	148.36
Total liabilities	14,453.07	69,198.99	20,377.85	50.00	857.27
RESERVES					
For equity in H-E.P.C. systems	18,996.04	41,282.87	11,662.35	5,725.54	5,745.83
For depreciation	12,577.75	243,222.61	15,560.28	3,603.25	4,212.00
Other reserves		151,598.56			
Total reserves	31,573.79	436,104.04	27,222.63	9,328.79	9,957.83
SURPLUS					
Debentures paid	10,675.62	259,165.00	13,774.85	7,561.47	9,970.42
Local sinking fund		22,247.07			
Operating surplus	29,518.94	621,280.26	10,098.77	5,457.00	1,389.57
Total surplus	40,194.56	902,692.33	23,873.62	13,018.47	11,359.99
Total liabilities, reserves and surplus	86,221.42	1,407,995.36	71,474.10	22,397.26	22,175.09
Percentage of net debt to total assets	21.5	3.4	34.1	0.3	5.2

"A"—Continued

Hydro Municipalities as at December 31, 1939

Lindsay 7,138	Madoc 1,108	Marmora 995	Martintown P.V.	Maxville 758	Millbrook 737	Morrisburg 1,853	Napanee 3,148
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
10,777.68	100.00	....	126.15	....	....	5,000.00	10,211.62
3,176.56	....	....	....	407.79	....	4,457.21	....
93,281.22	11,785.28	13,652.95	2,826.42	11,763.96	5,794.07	11,720.77	45,485.05
....	....	....	....	....	....	....	....
27,035.23	3,496.56	3,808.11	690.33	1,849.12	696.37	4,229.62	10,374.19
33,091.10	5,304.41	4,074.83	1,027.87	2,572.13	1,770.48	6,767.36	17,612.35
10,334.23	1,577.14	1,193.23	354.94	1,950.24	397.68	795.00	4,170.27
....	....	....	....	....	....	....	....
2,525.94	254.91	2,215.98	714.85	2,424.95	....	365.32	4,707.46
....	....	....	....	....	....	....	....
....	....	573.62	....	....	....	34,233.82	....
180,221.96	22,518.30	25,518.72	5,740.56	20,968.19	8,658.60	67,569.10	92,560.94
7,166.93	7,905.11	3,365.16	1,396.63	2,160.49	832.72	....	....
55,000.00	....	....	1,000.00	2,000.00	....	....	....
5,778.48	628.64	261.66	320.68	426.85	422.68	1,359.94	9,888.01
280.06	....	....	....	....	....	....	7,285.75
....	....	....	....	....	....	....	....
84,009.74	6,877.54	5,014.09	1,927.43	8,902.96	213.63	643.61	37,282.05
....	....	....	....	....	....	738.55	....
332,457.17	37,929.59	34,159.63	10,385.30	34,458.49	10,127.63	70,311.20	147,016.75
....	....	....	....	....	....	....	....
332,457.17	37,929.59	34,159.63	10,385.30	34,458.49	10,127.63	70,311.20	147,016.75
74,145.53	....	2,313.36	....	1,269.07	8,720.55	30,169.16	
....	775.94	....	....	....	148.94	305.07	1,000.00
....	....	....	....		....	790.24	4,280.79
2,550.29	366.00	135.00	7.00	105.00	181.82	738.55	780.62
76,695.82	1,141.94	2,448.36	7.00	1,374.07	9,051.31	32,003.02	6,061.41
84,009.74	6,877.54	5,014.09	1,927.43	8,902.96	213.63	643.61	37,282.05
38,814.31	1,881.12	4,192.33	2,070.50	6,110.16	173.00	659.00	10,038.61
....	....	....	81.02	400.00	....	31,296.54	
122,824.05	8,758.66	9,206.42	4,078.95	15,413.12	386.63	32,599.15	47,320.66
55,854.47	14,000.00	15,352.75	6,000.00	14,730.93	279.45	4,404.12	70,000.00
....	....	....	....	....	....	....	
77,082.83	14,028.99	7,152.10	299.35	2,940.37	410.24	1,304.91	23,634.68
132,937.30	28,028.99	22,504.85	6,299.35	17,671.30	689.69	5,709.03	93,634.68
332,457.17	37,929.59	34,159.63	10,385.30	34,458.49	10,127.63	70,311.20	147,016.75
30.9	3.7	8.4	0.1	5.4	91.3	45.4	5.5

STATEMENT

Balance Sheets of Electrical Departments of

EASTERN ONTARIO SYSTEM—Continued

Municipality	Newcastle	Norwood	Omemee	Orono	Oshawa
Population	700	710	553	P.V.	24,756
ASSETS	$ c.	$ c.	$ c.	$ c.	$ c.
Lands and buildings	107.37				60,926.33
Substation equipment		457.53	360.32		1,468.29
Distribution system—overhead	14,307.08	23,442.96	12,004.60	4,998.53	234,284.47
Distribution system—underground					
Line transformers	4,012.74	4,019.18	3,858.45	776.77	63,328.89
Meters	3,667.17	5,067.22	2,764.41	1,669.58	113,147.66
Street light equipment, regular	788.22	1,886.92	766.86	395.94	16,933.50
Street light equipment, ornamental					
Miscellaneous construction expense	729.84	3,940.80	1,625.92	277.97	33,069.91
Steam or hydraulic plant					
Old plant		2,447.51			8,831.65
Total plant	23,612.42	41,262.12	21,380.56	8,118.79	531,990.70
Bank and cash balance	1,040.68	1,671.02	7,140.79	1,355.25	12,618.12
Securities and investments		13,000.00			
Accounts receivable	148.81	1,847.84		554.63	61,952.91
Inventories					14,087.59
Sinking fund on local debentures					
Equity in H-E.P.C. systems	1,115.51	5,422.70		267.90	468,390.55
Other assets		370.72			194.65
Total assets	25,917.42	63,574.40	28,521.35	10,296.57	1,089,234.52
Deficit					
Total	25,917.42	63,574.40	28,521.35	10,296.57	1,089,234.52
LIABILITIES					
Debenture balance	7,500.00	20,173.43		7,356.50	123,801.36
Accounts payable	109.83	541.64	.06	365.43	51,786.86
Bank overdraft					
Other liabilities		370.72	161.48		24,489.25
Total liabilities	7,609.83	21,085.79	161.54	7,721.93	200,077.47
RESERVES					
For equity in H-E.P.C. systems	1,115.51	5,422.70		267.90	468,390.55
For depreciation	8,855.64	14,008.23	9,518.07	157.00	80,993.85
Other reserves					17,484.18
Total reserves	9,971.15	19,430.93	9,518.07	424.90	566,868.58
SURPLUS					
Debentures paid	6,500.00	16,926.57	12,000.00	643.50	186,198.64
Local sinking fund					
Operating surplus	1,836.44	6,131.11	6,841.74	1,506.24	136,089.83
Total surplus	8,336.44	23,057.68	18,841.74	2.149.74	322,288.47
Total liabilities, reserves and surplus	25,917.42	63,574.40	28,521.35	10,296.57	1,089,234.52
Percentage of net debt to total assets	30.7	35.9	0.6	77.0	32.2

"A"—Continued

Hydro Municipalities as at December 31, 1939

Ottawa 144,202	Perth 4,174	Peterborough 23,984	Picton 3,439	Port Hope 4,724	Prescott 2,925	Richmond 403
484,502.14	5,109.34	78,386.66	10,897.49	11,705.77	2,761.54	...
843,220.88	5,779.83	122,660.69	2,004.66	...	...	...
834,791.30	47,503.68	283,436.10	41,881.55	54,204.40	40,729.84	6,773.96
210,371.64	...	...	...	...	...	...
366,399.11	25,981.71	118,055.02	12,597.28	16,964.06	14,934.16	1,146.53
284,746.32	22,668.47	107,773.95	18,215.55	24,721.59	19,840.88	1,406.05
125,021.24	4,695.82	59,329.87	10,026.23	3,303.50	2,283.40	173.98
...	...	...	...	...	...	...
39,767.20	5,164.07	76,626.90	3,851.46	1,986.99	2,222.68	642.54
...	...	...	...	...	...	...
...	23,361.94	29,771.74	...	...	...	...
3,188,819.83	140,264.86	876,040.93	99,474.22	112,886.31	82,772.50	10,143.06
154,815.90	22,347.36	270.00	...	1,167.59	2,700.32	859.71
240,000.00	45,532.69	...	14,000.00	17,000.00	3,000.00	...
97,825.98	5,418.94	36,574.65	6,361.58	3,772.36	4,650.27	427.96
35,808.46	8,853.63	8,233.61	6,053.55	2,236.61	561.95	...
497,600.28	...	380,239.00	...	...	...	...
170,721.21	64,019.10	275,836.29	47,602.73	49,306.11	44,832.92	2,544.87
...	...	...	2,885.35	...	...	...
4,385,591.66	286,436.58	1,577,194.48	176,377.43	186,368.98	138,517.96	13,975.60
...	...	...	...	...	...	...
4,385,591.66	286,436.58	1,577,194.48	176,377.43	186,368.98	138,517.96	13,975.60
545,645.14	40,195.88	527,920.00	...	...	...	3,854.70
48,828.89	...	39,961.40	2,000.00	...	2,751.69	...
...	...	10,866.40	4,309.79	...	...	...
1,537.20	2,704.34	120.00	2,885.35	4,859.40	262.08	97.00
596,011.23	42,900.22	578,867.80	9,195.14	4,859.40	3,013.77	3,951.70
170,721.21	64,019.10	275,836.29	47,602.73	49,306.11	44,832.92	2,544.87
1,310,627.41	55,217.61	135,006.52	16,291.82	17,182.47	44,839.01	1,893.59
252,485.91	965.59	1,205.17	992.61	...	...	52.84
1,733,834.53	120,202.30	412,047.98	64,887.16	66,488.58	89,671.93	4,491.30
434,354.86	68,204.12	...	5,730.32	79,000.00	12,170.99	2,645.30
497,600.28	...	380,239.00	...	...	...	...
1,123,790.76	55,129.94	206,039.70	96,564.81	36,021.00	33,661.27	2,887.30
2,055,745.90	123,334.06	586,278.70	102,295.13	115,021.00	45,832.26	5,532.60
4,385,591.66	286,436.58	1,577,194.48	176,377.43	186,368.98	138,517.96	13,975.60
0.2	19.3	21.6	5.0	3.5	3.2	34.6

STATEMENT

Balance Sheets of Electrical Departments of

EASTERN ONTARIO SYSTEM—Concluded

Municipality	Russell	Smiths Falls	Stirling	Trenton	Tweed
Population	P.V.	7,672	960	6,833	1,228
ASSETS	$ c.	$ c.	$ c.	$ c.	$ c.
Lands and buildings		19,528.85	8,462.60	5,114.41	
Substation equipment		4,725.66	7,949.55	28,775.27	
Distribution system—overhead	8,186.58	89,456.42	6,862.77	109,378.94	13,632.03
Distribution system—underground					
Line transformers	1,513.25	34,809.79	4,541.30	24,033.01	4,281.55
Meters	1,782.53	36,582.19	5,211.54	31,046.45	5,284.97
Street light equipment, regular	589.70	9,508.35	3,183.33	15,886.37	1,526.07
Street light equipment, ornamental					
Miscellaneous construction expense	1,298.45	12,301.42	652.86	6,069.11	739.66
Steam or hydraulic plant		36,986.49			
Old plant		21,248.48			
Total plant	13,370.51	265,147.65	36,863.95	220,303.56	25,464.28
Bank and cash balance	1,918.45	14,667.86	6,558.33	7,053.98	
Securities and investments	2,500.00	48,000.00	2,294.33		
Accounts receivable	1,192.20	4,327.69	956.25	1,748.42	4,386.49
Inventories		26.55	941.68	4,742.51	2,094.25
Sinking fund on local debentures					
Equity in H-E.P.C. systems	5,125.83	93,297.91	7,843.64	66,823.12	8,287.57
Other assets					
Total assets	24,106.99	425,467.66	55,458.18	300,671.59	40,232.59
Deficit					
Total	24,106.99	425,467.66	55,458.18	300,671.59	40,232.59
LIABILITIES					
Debenture balance	4,180.23	4,872.48		40,831.74	8,477.92
Accounts payable		372.39	7.02	2,342.99	.09
Bank overdraft					594.93
Other liabilities		198.19	291.13	4,501.44	314.19
Total liabilities	4,180.23	5,443.06	298.15	47,676.17	9,387.13
RESERVES					
For equity in H-E.P.C. systems	5,125.83	93,297.91	7,843.64	66,823.12	8,287.57
For depreciation	2,889.34	89,474.02	5,466.61	32,484.89	2,937.28
Other reserves		2,339.91			353.33
Total reserves	8,015.17	185,111.84	13,310.25	99,308.01	11,578.18
SURPLUS					
Debentures paid	5,819.77	192,752.52	10,000.00	124,168.26	10,522.08
Local sinking fund					
Operating surplus	6,091.82	42,160.24	31,849.78	29,519.15	8,745.20
Total surplus	11,911.59	234,912.76	41,849.78	153,687.41	19,267.28
Total liabilities, reserves and surplus	24,106.99	425,467.66	55,458.18	300,671.59	40,232.59
Percentage of net debt to total assets	22.0	1.6	0.6	20.4	29.4

"A"—Continued

Hydro Municipalities as at December 31, 1939

Warkworth P.V.	Wellington 916	Westport 693	Whitby 3,724	Williamsburg P.V.	Winchester 1,040	EASTERN ONTARIO SYSTEM SUMMARY
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c
....	200.00	....	6,619.20	....	299.85	1.109,368.44
....	499.80	....	34,288.16	....	....	1,409.332.48
5,620.72	15,005.79	7,319.32	55,339.07	3,431.14	10,276.37	2,958,189.46
....	....	....	....	....	....	396,725.22
741.09	4,085.20	1,015.48	13,151.45	1,978.92	3,691.15	1,045,059.92
1,970.43	5,774.04	1,614.62	18,947.13	2,391.10	5,458.31	1,175,492.34
338.08	1,349.61	683.10	11,786.09	174.61	719.87	469,406.58
....	....	....	....	....	....	....
609.19	824.71	1,423.18	8,186.22	212.38	415.87	324,104.98
....	....	....	....	....	....	101,623.15
3.618.02	2,477.92	1,713.00	1,340.13	....	1,100.00	159,932.70
12,897.53	30,217.07	13,768.70	149,657.45	8.188.15	21,961.42	9,149,235.27
807.22	1,196.22	1,097.13	739.65	3,523.69	2,345.17	382,396 25
2,500.00	5,000.00	4,000.00	5,000.00	16,000.00	7,000.00	793,484.07
424.57	684.64	272.27	9,889.97	341.59	309.92	377,674.32
....	....	....	239.20	....	....	139,139 20
....	....	....	....	....	....	900,086 35
3,501.65	9,129.93	4,102.64	45,721.04	5,849.63	18,297.90	2,216,217.14
....	....	....	....	....	....	10,200.19
20,130 97	46,227.86	23,240.74	211,247.31	33,903.06	49,914.41	13,968,432.79
....	....	....	....	....	....	....
20,130.97	46,227.86	23,240.74	211,247.31	33,903.06	49,914.41	13,968,432.79
7,761.42	6,253.58	10,083.04	20,672.71	....	3,258.89	1.845.162.01
.97	....	....	3,780.80	284.24	155.22	198.795.40
....	....	....	....	....	....	26,765.51
14.00	56.25	110.00	1,284.02	419.87	10.00	80.154 68
7,776 39	6,309.83	10,193.04	25,737.53	704 11	3.424 11	2,150,877 60
3,501 65	9,129.93	4,102.64	45,721.04	5.849 63	18.297.90	2,216,217 14
2,606 77	9,653.77	1,629.56	25,169.19	3,211.72	9,235.34	2,512,968 77
....	....	....	....	358.04	....	479,621 59
6,108.42	18,783.70	5.732.20	70,890.23	9,419 39	27,533 24	5,208,807 50
3,238.58	10,746.42	4,916.96	55,939.79	2.750.00	7,391 11	2,405,850 82
....	....	....	....	....	....	900,086 35
3,007.58	10,387.91	2.398.54	58,679.76	21,029.56	11.565.95	3.302,810 52
6.246.16	21.134.33	7,315.50	114,619.55	23.779 56	18,957 06	6.608.747 69
20,130 97	46,227.86	23.240 74	211.247.31	33.903.06	49.914 41	13.968.432 79
46.8	17.0	53.3	15.5	2 5	10 8	11 6

STATEMENT

Balance Sheets of Electrical Departments of

THUNDER BAY SYSTEM

Municipality	Fort William	Nipigon Twp.	Port Arthur	THUNDER BAY SYSTEM SUMMARY
Population	24,301		20,872	
	$ c.	$ c.	$ c.	$ c.
ASSETS				
Lands and buildings	48,940.29	215.03	443,102.94	492,258.26
Substation equipment	143,281.34		301,211.75	444,493.09
Distribution system—overhead	187,365.05	16,050.74	485,333.56	688,749.35
Distribution system—underground				
Line transformers	75,545.58	3,773.80	86,408.53	165,727.91
Meters	76,433.14	3,591.34	98,000.50	178,024.98
Street light equipment, regular	45,913.97	1,497.05	79,793.26	127,204.28
Street light equipment, ornamental				
Miscellaneous construction expense	11,054.54	271.10	39,326.14	50,651.78
Steam or hydraulic plant			325,003.44	325,003.44
Old plant	293,762.46			293,762.46
Total plant	882,296.37	25,399.06	1,858,180.12	2,765,875.55
Bank and cach balance	1,268.56	1,206.01	18,538.62	21,013.19
Securities and investments	86,500.00	1,732.02	617,283.67	705,515.69
Accounts receivable	40,769.72	585.96	71,739.52	113,095.20
Inventories	10,159.86	13.75	26,787.00	36,960.61
Sinking fund on local debentures	126,644.57		37,640.84	164,285.41
Equity in H-E.P.C. systems	632,854.47	5,357.48	2,073,132.63	2,711,344.58
Other assets			433.98	433.98
Total assets	1,780,493.55	34,294.28	4,703,736.38	6,518,524.21
Deficit				
Total	1,780,493.55	34,294.28	4,703,736.38	6,518,524.21
LIABILITIES				
Debenture balance	300,000.00	3,672.51	43,738.03	347,410.54
Accounts payable	26,786.77		62,558.66	89,345.43
Bank overdraft	14,811.99		44,484.59	59,296.58
Other liabilities	25,664.34			25,664.34
Total liabilities	367,263.10	3,672.51	150,781.28	521,716.89
RESERVES				
For equity in H-E.P.C. systems	632,854.47	5,357.48	2,073,132.63	2,711,344.58
For depreciation	143,167.37	3,871.90	536,877.71	683,916.98
Other reserves	24,391.69		87,113.32	111,505.01
Total reserves	800,413.53	9,229.38	2,697,123.66	3,506,766.57
SURPLUS				
Debentures paid	367,650.00	6,327.49	598,361.97	972,339.46
Local sinking fund	126,644.57		37,640.84	164,285.41
Operating surplus	118,522.35	15,064.90	1,219,828.63	1,353,415.88
Total surplus	612,816.92	21,392.39	1,855,831.44	2,490,040.75
Total liabilities, reserves and surplus	1,780,493.55	34,294.28	4,703,736.38	6,518,524.21
Percentage of net debt to total assets	23.6	12.7	4.4	9.8

"A"—Concluded

Hydro Municipalities as at December 31, 1939

NORTHERN ONTARIO DISTRICTS—

Capreol 1,680	Sioux Lookout 1,901	Sudbury 26,463	NORTHERN ONTARIO DISTRICTS SUMMARY	ALL SYSTEMS GRAND SUMMARY
$ c.	$ c.	$ c.	$ c.	$ c.
450.00		26,000.00	26,450.00	11,030,623.50
9,527.32		76,685.72	86,213.04	23,780,655.18
12,728.97	8,252.22	317,645.84	338,627.03	23,925,362.60
				6,202,371.87
4,130.65	3,553.01	86,514.36	94,198.02	10,855,346.75
4,821.20	5,617.22	110,420.13	120,858.55	9,838,600.98
1,038.36	1,698.95	86,261.07	88,998.38	2,798,171.62
				1,518,035.24
840.70	603.61	13,329.25	14,773.56	4,147,280.84
				498,650.81
				4,894,655.59
33,537.20	19,725.01	716,856.37	770,118.58	99,489,754.98
418.79	1,896.59	83,880.15	86,195.53	3,107,087.65
		58,500.00	58,500.00	4,850,531.80
799.95	209.96	21,580.92	22,590.83	4,774,816.58
		13,300.55	13,300.55	1,496,275.62
				11,032,594.44
				48,615,296.94
				156,520.39
34,755.94	21,831.56	894,117.99	950,705.49	173,522,878.40
				21,889.57
34,755.94	21,831.56	894,117.99	950,705.49	173,544,767.97
987.00		126,648.96	127,635.96	27,962,685.51
2.71	5,933.34	32,369.46	38,305.51	3,100,565.26
				180,064.81
290.00	1,375.76	31,622.78	33,288.54	2,998,174.20
1,279.71	7,309.10	190,641.20	199,230.01	34,241,489.78
				48,615,296.94
3,230.00	95.60	47,641.68	50,967.28	24,046,526.92
156.16		48,144.65	48,300.81	3,090,471.34
3,386.16	95.60	95,786.33	99,268.09	75,752,295.20
18,013.00		340,689.57	358,702.57	32,866,660.82
				11,032,594.44
12,077.07	14,426.86	267,000.89	293,504.82	19,651,727.73
30,090.07	14,426.86	607,690.46	652,207.39	63,550,982.99
34,755.94	21,831.56	894,117.99	950,705.49	173,544,767.97
3.7	33.5	26.6	29.5	19.3

STATEMENT

Detailed Operating Reports of Electrical Departments of

NIAGARA
SYSTEM

Municipality	Acton	Agincourt	Ailsa Craig	Alvinston	Amherstburg
Population	1,869	P.V.	483	650	2,857
EARNINGS	$ c.	$ c.	$ c.	$ c.	$ c
Domestic service	10,990.19	4,842.83	2,419.50	3,524.01	21,441.70
Commercial light service	4,871.41	1,253.62	1,381.74	2,394.00	7,343.19
Commercial power service	15,555.34	972.14	925.47	187.01	8,576.03
Municipal power	637.43	....	....	339.69	....
Street lighting	1,983.06	756.00	683.30	1,584.00	2,311.18
Merchandise	....	....	....	....	....
Miscellaneous	308.24	251.41	328.11	165.00	274.31
Total earnings	34,345.67	8,076.00	5,738.12	8,193.71	39,946.41
EXPENSES					
Power purchased	26,884.01	5,881.04	4,262.87	4,577.91	26,442.06
Substation operation	....	....	....	....	....
Substation maintenance	....	....	....	....	....
Distribution system, operation and maintenance	3,008.49	64.43	80.67	183.48	1,585.14
Line transformer maintenance	71.33	77.56	....	80.47	42.00
Meter maintenance	174.00	77.59	131.75	88.35	783.63
Consumers' premises expenses	402.65	85.58	....	....	1,496.46
Street lighting, operation and maintenance	284.49	98.68	52.45	36.53	720.48
Promotion of business	132.63	....	....	....	769.06
Billing and collecting	592.18	379.08	250.00	416.94	1,353.63
General office, salaries and expenses	575.54	147.55	63.85	90.13	1,202.11
Undistributed expenses	55.74	....	13.69	18.81	130.67
Truck operation and maintenance	205.20	....	....	....	155.72
Interest	....	....	....	172.87	828.41
Sinking fund and principal payments on debentures	....	....	....	1,445.63	1,799.34
Depreciation	1,482.00	435.00	523.00	755.00	2,441.00
Other reserves	....	60.05	....	....	185.10
Total operating costs and fixed charges	33,868.26	7,306.56	5,378.28	7,866.12	39,934.81
Net surplus	477.41	769.44	359.84	327.59	11.60
Net loss	....	....	....	....	....
NUMBER OF CONSUMERS					
Domestic service	510	154	142	268	682
Commercial light service	89	26	35	53	122
Power service	16	2	2	2	15
Total	615	182	179	323	819

"B"

Hydro Municipalities for Year Ended December 31, 1939

Ancaster Twp.	Arkona 397	Aylmer 2,156	Ayr 730	Baden P.V.	Beachville P.V.	Beamsville 1,161
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
11,135.51	2,712.22	11,100.15	5,469.70	3,454.51	3,505.23	9,505.80
3,200.32	1,694.67	9,744.64	1,708.80	2,102.12	731.95	4,912.50
562.94	56.27	4,042.58	528.62	5,437.00	10,388.06	2,007.22
305.30	....	1,164.08	....	....	....	....
1,054.00	1,072.00	2,575.83	1,028.00	711.00	517.00	1,908.00
....	....	....	....	....	....	....
....	....	849.68	30.00	27.78	187.42	199.65
16,258.07	5,535.16	29,476.96	8,765.12	11,732.41	15,329.66	18,533.17
9,251.96	3,124.62	17,467.82	5,681.01	9,025.71	12,891.64	9,771.84
....	....	....	....	....	....	....
....	....	....	....	....	....	....
1,159.38	170.99	890.42	612.45	65.13	286.43	176.38
103.85	....	41.36	....	....	....	4.35
74.32	61.97	383.31	142.20	56.10	81.20	5.41
191.69	4.48	50.41	123.56	179.94	59.42	288.78
282.29	67.98	358.97	123.04	100.02	129.42	203.45
....	....	95.85	....	....	....	4.00
911.90	179.85	1,006.25	383.13	289.95	376.67	583.50
786.86	119.08	710.64	71.85	132.57	105.81	680.84
34.68	....	186.49	16.67	14.64	....	5.57
....	....	176.20	....	....	....	....
517.80	355.11	739.49	246.85	44.29	58.55	1,449.63
412.94	776.58	1,768.43	468.56	280.97	299.24	1,309.69
1,108.00	402.00	1,746.00	697.00	523.00	741.00	1,049.00
....	....	....	....	....	....	1,099.88
14,835.67	5,262.66	25,621.64	8,566.32	10,712.32	15,029.38	16,637.32
1,422.40	272.50	3,855.32	198.80	1,020.09	300.28	1,895.85
....	....	....	....	....	....	....
324	103	698	225	150	163	349
36	36	157	41	39	22	73
6	1	12	5	2	4	6
366	140	867	271	191	189	428

STATEMENT

Detailed Operating Reports of Electrical Departments of

NIAGARA SYSTEM—Continued

Municipality	Belle River	Blenheim	Blyth	Bolton	Bothwell
Population	814	1,758	656	600	694
EARNINGS	$ c.	$ c.	$ c.	$ c.	$ c.
Domestic service	4,462.41	8,934.25	3,396.76	4,113.76	2,746.74
Commercial light service	2,446.87	7,801.22	1,956.94	1,726.74	1,669.08
Commercial power service	105.07	3,037.28	418.21	2,029.64	550.08
Municipal power	1,114.67	1,875.90	....	132.75	143.70
Street lighting	1,030.00	2,626.15	1,580.00	1,070.52	1,225.02
Merchandise	....	66.58	....	....	41.79
Miscellaneous	44.84	822.84	97.50	206.25	513.32
Total earnings	9,203.86	25,164.22	7,449.41	9,279.66	6,889.73
EXPENSES					
Power purchased	5,135.08	15,176.23	4,696.97	4,900.57	4,648.58
Substation operation	....	....	....	....	....
Substation maintenance	....	....	....	....	....
Distribution system, operation and maintenance	767.00	1,307.85	320.50	328.60	272.14
Line transformer maintenance	263.15	227.35	....	....	....
Meter maintenance	265.94	627.63	4.34	250.67	96.73
Consumers' premises expenses	....	794.13	4.50	185.85	243.93
Street lighting, operation and maintenance	151.84	633.12	119.93	109.55	195.93
Promotion of business	27.90	....	2.50	36.52	53.04
Billing and collecting	564.87	1,155.02	307.50	....	219.35
General office, salaries and expenses	354.83	1,510.12	130.76	604.21	86.44
Undistributed expenses	39.52	166.91	25.43	....	6.68
Truck operation and maintenance	....	....	....	....	....
Interest	....	648.56	220.52	158.12	121.68
Sinking fund and principal payments on debentures	....	676.41	1,092.39	461.25	241.58
Depreciation	890.00	1,951.00	555.00	686.00	653.00
Other reserves	....	115.40	....	....	....
Total operating costs and fixed charges	8,460.13	24,989.73	7,480.34	7,721.34	6,839.08
Net surplus	743.73	174.49	....	1,558.32	50.65
Net loss	....	....	30.93	....	....
NUMBER OF CONSUMERS					
Domestic service	244	557	176	178	189
Commercial light service	44	133	47	48	54
Power service	2	14	3	10	7
Total	290	704	226	236	250

"B"—Continued

Hydro Municipalities for Year Ended December 31, 1939

Brampton 5,695	Brantford 31,369	Brantford Twp.	Bridgeport P.V.	Brigden P.V.	Brussels 773	Burford P.V.
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
40,356.23	170,626.49	22,718.14	4,850.10	2,316.18	4,509.68	4,456.75
18,944.60	75,947.63	4,266.29	798.07	1,960.77	3,014.64	1,201.70
18,362.80	195,730.43	3,432.69	144.10	654.56	713.92	605.97
1,543.68	17,040.67	....	....	....	....	....
6,458.66	33,593.94	4,151.87	799.50	800.00	1,296.00	670.08
....	....	....	....	....	....	....
437.64	5,089.31	398.99	....	86.29	214.06	305.60
86,103.61	498,028.47	34,967.98	6,591.77	5,817.80	9,748.30	7,240.10
68,712.33	365,907.89	20,798.48	3,794.72	3,650.19	5,396.09	5,006.14
245.10	10,651.30	....	....	....	....	....
....	2,055.61	....	....	....	....	....
1,649.14	7,159.64	1,470.65	71.02	223.63	408.90	96.52
247.50	571.12	113.41	....	....	....	....
988.85	5,308.05	572.59	9.55	34.83	48.80	143.80
422.53	4,593.58	5.03	56.65	....	....	104.64
901.63	4,097.60	895.56	62.03	113.40	153.16	90.44
50.00	1,612.23	....	....	....	....	....
1,705.50	10,556.39	1,837.97	373.13	307.24	....	524.28
2,010.27	9,031.38	1,698.31	30.79	205.44	612.38	113.99
144.48	4,367.46	9.66	5.00	20.38	....	8.23
204.37	2,341.15	....	....	....	....	....
350.45	4,352.50	99.34	775.88	....	412.72	....
2,373.71	15,750.00	1,986.97	416.48	....	1,344.56	....
5,611.00	33,305.00	3,113.00	576.00	444.00	726.00	567.00
150.00	2,000.00	23.54	....	....	....	....
85,766.86	483,660.90	32,624.51	6,171.25	4,999.11	9,102.61	6,655.04
336.75	14,367.57	2,343.47	420.52	818.69	645.69	585.06
....	....	....	....	....	....	....
1,486	7,693	970	183	117	240	196
245	1,159	53	19	39	69	29
53	223	8	1	4	2	1
1,784	9,075	1,031	203	160	311	226

STATEMENT

Detailed Operating Reports of Electrical Departments of

NIAGARA SYSTEM—Continued

Municipality	Burgess-ville	Caledonia	Campbell-ville	Cayuga	Chatham
Population	P.V.	1,425	P.V.	682	16,517
EARNINGS	$ c.	$ c.	$ c.	$ c.	$ c.
Domestic service	1,647.51	6,679.25	1,681.59	3,811.30	90,972.33
Commercial light service	794.22	5,200.34	731.66	3,866.43	84,482.07
Commercial power service	240.83	1,740.26	....	922.61	71,866.58
Municipal power	....	....	....	....	6,438.86
Street lighting	312.00	1,908.27	460.00	1,437.93	19,356.31
Merchandise	....	....	....	....	1,448.56
Miscellaneous	....	121.41	65.14	113.62	600.00
Total earnings	2,994.56	15,649.53	2,938.39	10,151.89	275,164.71
EXPENSES					
Power purchased	2,136.20	9,577.04	1,545.17	4,962.82	151,726.34
Substation operation	....	....	....	....	7,852.39
Substation maintenance	....	....	....	....	2,831.28
Distribution system, operation and maintenance	114.57	816.44	44.60	598.00	7,949.78
Line transformer maintenance	11.35	69.68	....	15.82	1,361.28
Meter maintenance	17.00	211.49	....	149.06	5,173.00
Consumers' premises expenses	....	149.70	....	....	4,496.85
Street lighting, operation and maintenance	15.36	366.44	22.71	221.75	6,139.39
Promotion of business	....	112.52	....	39.40	5,909.69
Billing and collecting	....	635.48	....	605.52	8,919.32
General office, salaries and expenses	152.52	604.31	104.44	480.47	14,389.20
Undistributed expenses	.68	138.67	....	72.45	5,394.65
Truck operation and maintenance	....	195.65	....	....	3,006.44
Interest	1.12	18.04	129.20	468.77	8,800.97
Sinking fund and principal payments on debentures	....	343.68	364.84	1,213.76	12,327.04
Depreciation	249.00	803.00	142.00	757.00	19,929.00
Other reserves	....	....	....	....	....
Total operating costs and fixed charges	2,697.80	14,042.14	2,352.96	9,584.82	266,206.62
Net surplus	296.76	1,607.39	585.43	567.07	8,958.09
Net loss	....	....	....	....	....
NUMBER OF CONSUMERS					
Domestic service	56	406	51	171	4,127
Commercial light service	18	102	13	62	792
Power service	2	8	....	7	108
Total	76	516	64	240	5,027

"B"—Continued

Hydro Municipalities for Year Ended December 31, 1939

Chippawa	Clifford	Clinton	Comber	Cottam	Courtright	Dashwood
1,140	452	1,888	P.V.	P.V.	329	P.V.
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
7,714.04	2,553.97	12,430.52	2,029.18	2,342.16	1,718.52	1,672.59
2,316.26	2,182.03	8,024.21	1,976.44	1,417.41	1,123.94	1,156.66
43.25	511.38	3,102.83	1,785.36	280.70	...	738.26
1,172.06	...	937.74	...	...	989.57	...
1,689.33	951.94	2,705.80	689.50	480.00	688.00	451.01
...	...	198.30	...	...	...	...
160.24	32.17	946.78	270.67	262.19	...	86.05
13,095.18	6,231.49	28,346.18	6,751.15	4,782.46	4,520.03	4,104.57
5,772.45	3,742.82	16,952.42	5,305.39	2,793.06	2,276.39	2,850.25
...	...	...	...	...	...	...
...	...	100.00	...	...	...	...
1,076.28	52.43	888.20	361.08	149.86	180.01	33.65
58.20	...	141.72	...	...	...	...
246.59	29.70	172.03	16.90	100.88	...	1.35
460.29	18.34	311.23	...	31.58	...	6.74
420.17	40.64	356.82	99.09	96.93	52.30	30.17
55.94	...	...	...	...	...	...
672.08	352.50	877.64	215.37	...	199.09	163.61
761.74	36.11	1,251.23	447.86	425.30	15.72	67.09
138.59	14.53	78.02	20.06	6.17	6.12	7.96
...	...	238.06	...	...	...	...
119.03	316.73	412.50	31.24	262.40	2.91	82.16
1,091.74	233.70	180.09	205.62	490.74	...	152.44
720.00	365.00	2,375.00	560.00	453.00	265.00	276.00
...	...	...	...	...	14.21	...
11,593.10	5,202.50	24,334.96	7,262.61	4,809.92	3,011.75	3,671.42
1,502.08	1,028.99	4,011.22	...	...	1,508.28	433.15
...	...	...	511.46	27.46	...	...
335	122	575	105	111	72	83
49	38	133	47	29	25	27
2	1	16	2	1	1	2
386	161	724	154	141	98	112

STATEMENT

Detailed Operating Reports of Electrical Departments of

NIAGARA
SYSTEM—Continued

Municipality	Delaware	Delhi	Dorchester	Drayton	Dresden
Population	P.V.	2,083	P.V.	527	1,572
EARNINGS	$ c.	$ c.	$ c.	$ c.	$ c.
Domestic service	1,812.37	10,831.84	2,581.81	3,434.83	6,361.53
Commercial light service	805.48	10,683.59	942.56	1,960.72	6,003.98
Commercial power service	....	7,346.13	706.59	1,274.16	2,934.90
Municipal power	....	....	....	....	510.40
Street lighting	270.00	2,140.90	720.00	960.00	2,061.48
Merchandise	....	....	....	....	....
Miscellaneous	59.31	447.07	115.86	215.00	521.46
Total earnings	2,947.16	31,449.53	5,066.82	7,844.71	18,393.75
EXPENSES					
Power purchased	1,877.64	13,919.60	3,410.83	5,285.81	13,477.08
Substation operation	....	504.72	....	....	....
Substation maintenance	....	....	....	....	....
Distribution system, operation and maintenance	86.80	2,158.95	236.46	158.28	1,981.27
Line transformer maintenance	....	102.30	1.50	231.09	....
Meter maintenance	10.48	185.79	....	46.15	319.00
Consumers' premises expenses	....	328.30	31.43	10.95	....
Street lighting, operation and maintenance	27.05	231.60	26.36	166.85	348.39
Promotion of business	53.02	297.56	60.00	....	363.35
Billing and collecting	153.15	1,087.34	159.03	....	861.07
General office, salaries and expenses	37.80	815.05	49.47	389.80	953.35
Undistributed expenses	....	70.62	....	....	81.05
Truck operation and maintenance	....	547.79	....	....	176.95
Interest	66.09	2,581.16	80.55	286.65	....
Sinking fund and principal payments on debentures	194.21	1,847.00	199.17	403.51	....
Depreciation	204.00	1,335.00	445.00	654.00	967.00
Other reserves	....	....	....	....	....
Total operating costs and fixed charges	2,710.24	26,012.78	4,699.80	7,633.09	19,528.51
Net surplus	236.92	5,436.75	367.02	211.62	....
Net loss	....	....	....	....	1,134.76
NUMBER OF CONSUMERS					
Domestic service	61	549	141	167	437
Commercial light service	17	153	27	65	127
Power service	....	5	2	4	11
Total	78	707	170	236	575

"B"—Continued

Hydro Municipalities for Year Ended December 31, 1939

Drumbo P.V.	Dublin P.V.	Dundas 4,839	Dunnville 3,928	Dutton 793	East York Twp.	Elmira 2,074
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
2.313.04	1,436.66	22,165.10	13,959.08	3,119.40	192,960.94	14,785.29
912.01	805.84	12.309.03	14,333.57	2,338.36	30,298.00	7,496.29
640.20	1,287.99	21,382.58	10,625.69	2,903.15	32,354.53	5,152.04
....	....	363.44	2,513.76	....	5,209.90	863.52
528.66	550.00	5,628.00	3,577.92	1,036.44	21,128.99	2,035.00
....	....	....	....	....	....	....
85.54	....	615.19	1,181.49	271.60	349.74	871.85
4,479.45	4,080.49	62,463.34	46,191.51	9,668.95	282,302.10	31,203.99
2,926.28	2,913.02	41,163.02	24,497.91	7,320.69	180,307.63	19,314.88
....	....	581.53	355.00	....	183.30	....
....	....	....	....	....	....	....
298.49	29.30	4,862.29	2,927.59	464.03	8,066.86	1,775.37
4.89	....	357.76	337.77	34.90	501.45	167.49
77.03	....	829.91	444.51	77.30	4,786.62	12.40
21.53	16.19	277.75	....	4.65	4,887.62	293.03
117.73	97.13	1,392.01	848.08	192.49	2,026.44	201.55
....	....	75.00	98.38	....	....	304.02
225.52	107.96	1,396.64	976.84	444.20	14,679.80	746.50
89.57	89.19	2,352.04	1,307.56	160.35	13,052.46	625.92
1.05	13.03	602.70	183.47	28.01	911.51	245.38
....	....	989.71	233.92	....	....	293.91
74.29	....	731.84	2.067.98	....	10.390.30	843.34
218.44	....	2,839.77	3,492.95	....	19,048.63	2.180 19
353.00	350.00	5.010.00	3,805.00	683.00	15.728.00	2.445 00
....	....	....	....	....	....	....
4,407.82	3,615.82	63,461.97	41,576.96	9,409.62	274,570.62	29,448 98
71.63	464.67	....	4,614.55	259.33	7,731.48	1.755 01
....	....	998.63	....	....	....	....
90	56	1.267	948	222	9,729	527
27	22	192	224	64	428	123
1	2	36	24	10	44	21
118	80	1,495	1,196	296	10,201	671

STATEMENT

Detailed Operating Reports of Electrical Departments of

NIAGARA SYSTEM—Continued

Municipality	Elora	Embro	Erieau	Erie Beach	Essex
Population	1,149	423	295	28	1,854
EARNINGS	$ c.	$ c.	$ c.	$ c.	$ c.
Domestic service	7,465.96	3,097.16	3,988.67	1,784.35	7,984.64
Commercial light service	4,105.50	1,335.25	1,300.02	380.50	6,790.64
Commercial power service	2,884.29	231.30	426.97		4,639.67
Municipal power					1,470.18
Street lighting	1,544.64	636.00	432.00		2,156.68
Merchandise	28.64				
Miscellaneous	454.88	102.74			657.04
Total earnings	16,483.91	5,402.45	6,147.66	2,164.85	23,698.85
EXPENSES					
Power purchased	10,703.15	3,492.04	3,437.98	1,122.17	13,482.39
Substation operation					
Substation maintenance					
Distribution system, operation and maintenance	1,164.31	109.31	203.99	92.89	550.32
Line transformer maintenance			119.34	14.73	36.15
Meter maintenance	146.66	37.98	162.80	40.31	389.92
Consumers' premises expenses		67.49	124.68	11.15	83.00
Street lighting, operation and maintenance	280.44	99.15	56.47		378.27
Promotion of business		80.00			112.16
Billing and collecting	770.31	250.68	505.50	213.96	1,101.18
General office, salaries and expenses	817.67	98.89	221.77	33.74	1,648.70
Undistributed expenses	123.69		27.20	.56	195.15
Truck operation and maintenance	264.09				321.56
Interest		38.07	157.18	107.21	891.36
Sinking fund and principal payments on debentures		616.94	460.96	180.49	657.30
Depreciation	1,305.00	603.00	477.00	109.00	2,170.00
Other reserves					97.00
Total operating costs and fixed charges	15,575.32	5,493.55	5,954.87	1,926.21	22,114.46
Net surplus	908.59		192.79	238.64	1,584.39
Net loss		91.10			
NUMBER OF CONSUMERS					
Domestic service	331	114	195	86	478
Commercial light service	72	38	16	3	119
Power service	3	2	2		16
Total	406	154	213	89	613

"B"—Continued

Hydro Municipalities for Year Ended December 31, 1939

Etobicoke Twp.	Exeter 1,649	Fergus 2,792	Fonthill 867	Forest 1,520	Forest Hill 11,117	Galt 14,219
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
146,226.81	11,169.75	18,394.08	5,135.52	11,957.16	194,446.50	93,458.17
23,166.79	6,151.82	7,675.47	1,762.50	6,181.06	25,339.30	44,152.99
22,314.44	2,836.88	12,574.48	270.78	3,699.64	2,483.11	110,778.38
5,522.34	470.73	618.47	233.45	896.86	467.52	4,195.45
13,767.62	2,736.87	2,758.86	1,364.83	2,426.34	7,176.06	16,292.92
....	291.86	5.64	....	36.59	....	....
....	885.19	....	59.11	782.89	2,378.74	2,779.16
210,998.00	24,543.10	42,027.00	8,826.19	25,980.54	232,291.23	271,657.07
137,288.68	15,818.30	32,205.27	3,278.74	16,377.76	157,283.53	188,979.83
....	....	....	....	....	....	4,888.22
....	....	....	....	....	1,861.11	495.83
7,152.66	721.41	1,027.47	451.24	1,554.27	4,326.19	2,895.40
751.50	....	242.13	....	26.20	114.79	704.87
1,463.16	654.59	550.59	31.75	177.20	1,231.28	2,191.32
7,083.55	595.81	178.27	35.86	1,146.94	3,797.91	3,981.89
841.61	452.30	719.63	73.43	309.01	642.27	1,842.45
....	....	....	....	102.75	....	1,757.61
6,715.09	877.08	1,044.45	512.32	936.70	4,284.16	4,315.69
4,930.50	1,704.38	780.76	197.69	1,280.84	5,332.35	5,193.63
2,083.52	46.85	185.00	63.53	145.01	670.19	1,852.12
1,157.56	276.09	287.00	....	292.40	950.28	643.86
6,476.96	131.93	860.70	569.19	325.54	11,731.90	5,232.36
13,113.91	1,287.12	1,419.11	1,398.97	1,052.90	11,772.54	22,949.03
14,344.00	1,826.00	1,887.00	582.00	1,731.00	10,432.00	27,054.00
....	....	....	....	....	380.65	....
203,402.70	24,391.86	41,387.38	7,194.72	25,458.52	214,811.15	274,978.11
7,595.30	151.24	639.62	1,631.47	522.02	17,480.08	....
....	....	....	....	....	....	3,321.04
4,339	475	721	236	466	2,988	3,900
241	131	119	33	124	228	503
35	13	13	3	22	21	110
4,615	619	853	272	612	3,237	4,513

STATEMENT

Detailed Operating Reports of Electrical Departments of

NIAGARA SYSTEM—Continued

Municipality	Georgetown	Glencoe	Goderich	Granton	Guelph
Population	2,345	726	4,407	P.V.	21,514
EARNINGS	$ c.	$ c.	$ c.	$ c.	$ c.
Domestic service	17,938.54	5,017.33	29,991.07	1,869.76	109,406.55
Commercial light service	7,627.30	3,952.16	16,356.05	1,013.83	54,815.24
Commercial power service	25,759.30	1,729.16	11,069.10		112,844.95
Municipal power	694.34	1,534.78	2,438.37		12,575.04
Street lighting	2,736.29	1,962.00	4,488.13	370.00	18,961.48
Merchandise			396.91		
Miscellaneous	566.79	264.00	559.89	202.17	895.95
Total earnings	55,322.56	14,459.43	65,299.52	3,455.76	309,499.21
EXPENSES					
Power purchased	42,262.47	9,003.74	41,332.26	2,384.86	235,476.37
Substation operation			1,794.90		3,727.96
Substation maintenance					
Distribution system, operation and maintenance	1,836.91	669.75	2,802.53	25.39	7,710.70
Line transformer maintenance	182.89		162.80	25.70	708.46
Meter maintenance	150.87	110.71	714.62	67.40	4,472.27
Consumers' premises expenses	255.75	26.19	260.72	128.93	1,373.22
Street lighting, operation and maintenance	296.59	146.68	605.08	54.01	4,510.32
Promotion of business	39.46	13.99	31.01		991.20
Billing and collecting	1,767.20	495.19	1,605.38	259.39	6,764.81
General office, salaries and expenses	974.56	353.75	1,864.67	65.81	11,078.15
Undistributed expenses	129.87	166.21	142.61	5.84	945.06
Truck operation and maintenance	392.61		240.14		2,426.97
Interest	367.23	87.76	1,961.81	88.16	125.00
Sinking fund and principal payments on debentures	1,085.75	1,353.27	3,006.99	169.06	105.10
Depreciation	2,412.00	1,210.00	6,649.00	287.00	19,738.00
Other reserves		54.00			
Total operating costs and fixed charges	52,154.16	13,691.24	63,174.52	3,561.55	300,153.59
Net surplus	3,168.40	768.19	2,125.00		9,345.62
Net loss				105.79	
NUMBER OF CONSUMERS					
Domestic service	735	220	1,258	89	5,355
Commercial light service	123	81	248	31	789
Power service	25	9	20		138
Total	883	310	1,526	120	6,282

"B"—Continued

Hydro Municipalities for Year Ended December 31, 1939

Hagersville	Hamilton	Harriston	Harrow	Hensall	Hespeler	Highgate
1,355	154,751	1,269	1,032	685	2,789	362
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
6,043.26	834,807.68	7,187.62	9,057.95	4,099.63	14,813.84	1,624.48
6,014.68	456,944.77	4,738.48	5,009.00	2,712.51	4,983.93	899.31
11,790.19	1,681,152.60	5,423.74	2,761.98	3,231.08	42,911.27	1,014.11
....	68,163.15	423.21	....	33.74	931.04	29.35
2,050.00	123,751.44	1,606.50	1,348.50	1,008.00	3,173.11	567.00
....	....	....	202.57	....	....	....
942.90	61,311.83	156.95	16.80	340.02	1,275.95	171.39
26,841.03	3,226,131.47	19,536.50	18,396.80	11,424.98	68,089.14	4,305.64
19,151.81	2,350,792.14	12,432.24	13,132.11	6,751.60	52,413.29	2,859 68
....	57,333.57	....	....	....	415.71	....
....	12,103.09	....	....	....	....	....
2,012.10	37,012.91	1,585.16	272.30	888.08	3,173.18	77.81
72.05	5,969.13	58.29	81.97	....	102.43	....
360.38	29,640.19	218.54	442.39	....	206.86	1.50
6.40	30,833.59	232.63	370.81	8.07	414.05	....
416.06	15,094.41	166.74	342.93	116.38	319.03	62.78
31.50	28,863.92	47.75	68.70	40.00	158.03	....
733.13	62,853.53	726.73	826.29	279.22	1,032.27	318.68
711.99	50,273.95	368.27	588.52	311.95	1,325.91	130.36
51.93	34,467.42	47.44	31.38	29.08	568.71	6.22
192.08	....	102.78	....	....	350.22	....
84.49	129,170.42	335.98	147.00	249.38	1,275.89	....
305.82	286,705.94	689.59	737.53	613.55	2,456.37	....
1,325.00	148,873.71	1,235.00	1,014.00	817.00	3,198.00	427.00
....	....	....	....	....	....	....
25,454.74	3,279,987.92	18,247.14	18,055.93	10,104.31	67,409.95	3,884.03
1,386.29	....	1,289.36	340.87	1,320.67	679.19	421.61
....	53,856.45	....	....	....	....	....
372	39,342	365	299	194	758	101
114	5,170	102	83	58	100	35
13	1,264	14	6	14	27	5
499	45,776	481	388	266	885	141

STATEMENT

Detailed Operating Reports of Electrical Departments of

NIAGARA
SYSTEM—Continued

Municipality	Humberstone	Ingersoll	Jarvis	Kingsville	Kitchener
Population	2,738	5,177	519	2,359	33,080
EARNINGS	$ c.	$ c.	$ c.	$ c.	$ c.
Domestic service	10,680.15	30,011.79	2,705.08	14,178.16	191,096.62
Commercial light service	3,094.09	16,968.52	1,967.35	7,719.47	119,999.12
Commercial power service	4,312.65	27,523.13	3,232.99	3,618.36	283,739.16
Municipal power		1,356.60		1,180.37	19,044.40
Street lighting	1,642.50	4,832.39	858.00	2,872.24	31,609.70
Merchandise					
Miscellaneous	546.80	1,050.54	171.11	1,353.07	1,368.27
Total earnings	20,276.19	81,742.97	8,934.53	30,921.67	646,857.27
EXPENSES					
Power purchased	10,181.30	61,071.95	6,066.53	17,727.42	501,994.12
Substation operation		734.82			8,203.48
Substation maintenance					2,017.73
Distribution system, operation and maintenance	1,038.02	3,519.81	35.72	1,760.72	12,445.25
Line transformer maintenance	22.70	19.79		51.62	874.60
Meter maintenance	117.50	872.30		416.26	5,662.76
Consumers' premises expenses		788.98		223.72	6,985.33
Street lighting, operation and maintenance	189.54	984.54	100.07	563.77	8,638.25
Promotion of business		600.84		138.27	5,636.73
Billing and collecting	710.20	1,235.29	549.20	1,906.35	15,322.89
General office, salaries and expenses	273.30	4,324.91	52.17	1,317.97	10,461.18
Undistributed expenses	10.86	1,390.08	7.56	363.58	8,384.33
Truck operation and maintenance	68.86	371.86		360.20	2,541.39
Interest	702.00		206.35	1,475.69	6,468.33
Sinking fund and principal payments on debentures	1,800.00		672.29	958.03	20,000.32
Depreciation	1,173.00	4,438.00	508.00	2,357.00	41,039.00
Other reserves					
Total operating costs and fixed charges	16,287.28	80,353.17	8,197.89	29,620.60	656,675.69
Net surplus	3,988.91	1,389.80	736.64	1,301.07	
Net loss					9,818 42
NUMBER OF CONSUMERS					
Domestic service	639	1,400	143	620	7,773
Commercial light service	79	234	44	150	1,085
Power service	8	45	4	17	253
Total	726	1,679	191	787	9,111

"B"—Continued

Hydro Municipalities for Year Ended December 31, 1939

Lambeth P.V.	La Salle 882	Leamington 5,630	Listowel 2,773	London 73,846	London Twp.	Long Branch 4,140
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
3,087.56	6,399.24	27,166.39	16,013.71	527,069.93	12,272.90	27,473.19
1,201.87	1,636.31	17,941.48	11,368.89	205,150.49	2,431.79	6,300.81
....	1,707.14	19,357.33	11,851.49	352,810.30	1,630.87	1,403.95
540.81	....	2,652.33	974.78	68,926.46	....	934.99
741.00	804.00	5,300.96	4,659.96	55,975.40	1,232.50	4,543.86
....	11.09	....	....	4,623.89	....	....
62.50	73.96	963.71	621.81	23,571.41	277.63	....
5,633.74	10,631.74	73,382.20	45,490.64	1,238,127.88	17,845.69	40,656.80
3,795.41	6,819.15	49,458.87	31,743.70	828,523.89	13,172.01	23,378.17
....	....	....	87.13	19,545.07	....	....
....	....	....	....	19,745.48	....	....
176.07	579.74	3,356.31	1,926.12	20.666,79	364.90	2,990.03
7.62	30.65	....	182.44	3,479.68	6.00	93.16
92.63	79.67	675.77	479.47	19,873.99	323.22	451.85
25.36	214.75	567.38	218.86	27,566.55	779.39	351.63
48.75	165.70	860.85	589.97	8,529.56	212.06	389.56
....	....	142.85	240.68	25,607.20	165.00	....
279.92	408.81	1,674.96	1,001.88	26,616.12	706.70	2,268.26
48.36	481.14	3,501.07	1,322.07	37,298.22	546.17	2,225.93
1.42	39.92	684.20	160.89	18,305.48	4.29	685.50
....	271.83	247.24	124.54	3,291.55	....	....
3.44	452.63	....	86.31	30,546.47	289.42	598.90
....	898.73	....	698.35	46,861.32	698.84	2,059.07
448.00	1,067.00	4,244.00	3,347.00	115,061.00	1,033.00	2,613.00
....	48.71	....	....	2,159.77	....	....
4,926.98	11,558.43	65,413.50	42,209.41	1,253,678.14	18,301.00	38,105.06
706.76	....	7,968.70	3,281.23	....	....	2,551.74
....	926.69	....	....	15,550.26	455.31	....
127	221	1,480	754	17,962	413	1,321
24	19	269	158	2,146	20	94
2	3	32	23	449	4	5
153	243	1,781	935	20,557	437	1,420

STATEMENT

Detailed Operating Reports of Electrical Departments of

NIAGARA
SYSTEM—**Continued**

Municipality	Lucan	Lynden	Markham	Merlin	Merritton
Population	610	P.V.	1,153	P.V.	2,656
EARNINGS	$ c.	$ c.	$ c.	$ c.	$ c.
Domestic service	4,311.08	2,093.19	7,323.65	2,283.67	13,140.02
Commercial light service	1,973.15	863.22	3,430.32	2,222.62	3,003.96
Commercial power service	1,797.84	709.67	2,607.63	495.47	114,589.35
Municipal power	....	....	379.66	....	2,301.00
Street lighting	1,261.33	440.00	1,428.00	705.72	3,354.00
Merchandise	....	....	....	....	....
Miscellaneous	299.82	22.89	383.02	474.20	325.01
Total earnings	9,643.22	4,128.97	15,552.28	6,181.68	136,713.34
EXPENSES					
Power purchased	5,376.63	2,745.41	9,925.20	2,955.74	114,531.32
Substation operation	....	....	....	....	1,623.88
Substation maintenance	....	....	....	....	....
Distribution system, operation and maintenance	543.66	148.94	924.16	223.09	2,239.71
Line transformer maintenance	....	17.51	120.53	15.37	63.38
Meter maintenance	34.11	72.34	22.75	52.95	628.64
Consumers' premises expenses	435.04	....	52.87	93.37	72.83
Street lighting, operation and maintenance	204.12	13.46	172.28	69.45	516.86
Promotion of business	....	111.64	74.00	....	....
Billing and collecting	604.74	....	860.30	233.78	1,405.51
General office, salaries and expenses	410.70	180.46	79.92	218.13	2,096.15
Undistributed expenses	56.14	29.25	34.07	1.47	155.85
Truck operation and maintenance	....	....	177.13	....	212.32
Interest	143.37	96.68	....	260.87	1,068.84
Sinking fund and principal payments on debentures	346.73	212.60	....	953.63	2,073.33
Depreciation	858.00	337.00	940.00	455.00	3,447.00
Other reserves	....	....	50.00	....	....
Total operating costs and fixed charges	9,013.24	3,965.29	13,433.21	5,532.85	130,135.62
Net surplus	629.98	163.68	2,119.07	648.83	6,577.72
Net loss	....	....	....	....	....
NUMBER OF CONSUMERS					
Domestic service	184	94	313	116	707
Commercial light service	56	14	71	48	66
Power service	7	2	9	2	15
Total	247	110	393	166	788

"B"—Continued

Hydro Municipalities for Year Ended December 31, 1939

Milton 1,848	Milverton 1.010	Mimico 7,012	Mitchell 1,615	Moorefield P.V.	Mount Brydges P.V.	Newbury 288
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
13,079.35	4,902.24	55,771.20	11,847.47	1,045.14	2,780.89	1,234.83
6,484.44	3,615.31	11,066.92	5,710.81	1,083.73	1,030.01	665.32
17,992.77	3,140.27	4,265.84	3,595.80	26.70	718.25	314.31
....	527.25	7,174.87	752.53	....	....	....
1,937.52	1,035.00	7,942.16	2,547.00	350.00	844.00	705.00
529.70	....	....	1,012.04	....	....	....
697.00	141.55	1,400.25	312.98	10.10	207.04	....
40,720.78	13,361.62	87,621.24	25,778.63	2,515.67	5,580.19	2,919.46
27,409.86	9,176.08	53,922.54	15,883.11	1,754.44	3,309.13	1,565.09
250.25	....	....	....	....	....	....
....	....	368.32	15.92	....	....	....
1,896.84	417.26	6,698.97	654.56	21.03	102.24	139.78
.50	....	237.27	43.99	....	20.68	....
787.58	354.22	689.99	309.19	76.20	81.32	42.96
441.90	124.50	1,459.19	686.44	....	21.90	....
203.16	64.70	1,344.58	374.60	32.37	33.30	77.28
....	....	....	36.54	....	....	....
820.96	702.39	2,296.58	940.38	....	253.00	70.05
1,323.70	418.47	2,144.94	1,538.22	131.42	88.42	93.68
135.19	20.49	327.31	520.07	....	6.37	10.75
353.91	....	436.34	584.90	....	....	....
286.42	....	3,041.23	....	....	79.77	84.52
965.04	....	6,416.14	....	....	210.59	500.00
2,329.00	827.00	6,599.00	3,619.00	235.00	426.00	373.00
100.00	....	390.00	....	....	....	....
37,304.31	12,105.11	86,372.40	25,206.92	2,250.46	4,632.72	2,957.11
3,416.47	1,256.51	1,248.84	571.71	265.21	947.47	....
....	....	....	....	....	....	37.65
518	252	1,870	489	57	143	69
110	73	152	125	31	40	21
15	9	19	23	1	3	1
643	334	2,041	637	89	186	91

STATEMENT

Detailed Operating Reports of Electrical Departments of

NIAGARA SYSTEM—Continued

Municipality Population	New Hamburg 1,458	New Toronto 7,140	Niagara Falls 18,928	Niagara-on the-Lake 1,670	North York Twp.
EARNINGS	$ c.	$ c.	$ c.	$ c.	$ c.
Domestic service	9,562.95	37,247.85	122,155.21	13,701.77	155,939.24
Commercial light service	4,551.01	17,359.11	61,692.64	4,155.49	23,719.66
Commercial power service	5,257.00	136,985.86	64,240.68	591.53	31,684.92
Municipal power	....	11,481.92	16,479.99	1,338.94	7,237.40
Street lighting	2,217.00	7,495.84	27,533.38	3,483.02	4,039.93
Merchandise	138.92	....	....	202.03	....
Miscellaneous	285.80	....	2,519.59	309.77	1,490.20
Total earnings	22,012.68	210,570.58	294,621.49	23,782.55	224,111.35
EXPENSES					
Power purchased	14,716.26	174,697.16	158,159.96	11,542.10	115,253.54
Substation operation	203.76	....	13,635.42	206.57	....
Substation maintenance	....	....	....	....	....
Distribution system, operation and maintenance	719.45	5,861.92	6,859.10	1,906.06	12,068.25
Line transformer maintenance	161.16	239.18	136.38	....	423.94
Meter maintenance	303.06	1,288.06	7,468.52	183.33	1,326.62
Consumers' premises expenses	122.60	63.27	190.50	286.96	2,218.42
Street lighting, operation and maintenance	269.40	947.64	3,790.02	818.68	875.86
Promotion of business	....	....	129.67	....	....
Billing and collecting	728.95	2,808.77	7,719.28	1,753.28	6,006.38
General office, salaries and expenses	1,158.29	6,622.13	10,650.77	1,756.79	6,097.22
Undistributed expenses	291.20	410.31	3,980.19	109.43	4,199.98
Truck operation and maintenance	385.69	631.87	1,301.88	173.84	3,223.56
Interest	116.75	112.66	11,106.61	877.22	17,584.28
Sinking fund and principal payments on debentures	1,062.06	407.76	33,991.26	1,319.59	21,816.95
Depreciation	1,593.00	6,666.00	28,233.00	2,146.00	16,405.00
Other reserves	....	....	....	....	....
Total operating costs and fixed charges	21,831.63	200,756.73	287,352.56	23,079.85	207,500.00
Net surplus	181.05	9,813.85	7,268.93	702.70	16,611.35
Net loss	....	....	....	....	....
NUMBER OF CONSUMERS					
Domestic service	368	1,745	4,633	524	4,711
Commercial light service	98	212	716	84	305
Power service	13	31	91	8	35
Total	479	1,988	5,440	616	5,051

"B"—Continued

Hydro Municipalities for Year Ended December 31, 1939

Norwich	Oil Springs	Otterville	Palmerston	Paris	Parkhill	Petrolia
1,365	514	P.V.	1,406	4,369	900	2,747
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
8,958.87	1,595.96	2,529.46	9,801.95	22,510.28	5,277.64	12,145.11
4,518.85	1,482.59	2,105.25	5,666.32	8,283.65	3,638.02	7,884.49
1,600.06	6,371.44	375.91	5,161.59	13,608.58	758.38	23,196.43
519.36	....	....	1,706.56	1,020.83	633.77	....
2,100.00	768.00	847.38	2,628.00	5,586.49	1,577.04	2,839.00
617.36	....	....	....	....	....	493.52
173.78	177.02	47.27	2.95	4,085.43	119.60	442.70
18,488.28	10,395.01	5,905.27	24,967.37	55,095.26	12,004.45	47,001.25
11,876.35	7,234.32	3,956.47	15,586.57	33,396.15	7,144.82	28,545.86
....	....	....	578.60	1,101.28	....	....
....	....	....	266.29	....	....	....
1,811.50	384.02	307.09	421.10	4,489.13	396.43	5,065.86
....	58.09	54.98	101.22	237.57	....	278.19
184.84	86.08	156.67	260.64	854.67	144.56	655.53
437.21	84.43	1.20	742.68	517.26	176.78	207.59
221.17	62.36	159.19	411.67	1,397.06	50.72	286.43
153.00	1.35	....	98.49	478.00	....	168.93
435.98	319.07	278.22	637.14	1,420.52	380.80	1,730.80
663.95	208.44	244.90	599.56	1,333.19	129.79	1,220.60
153.72	45.31	6.38	78.75	347.07	4.77	202.42
343.92	....	....	170.39	370.50	....	562.66
143.83	....	....	123.92	294.81	62.09	752.72
757.60	....	....	352.74	960.39	....	1,655.48
1,025.00	879.00	546.00	1,473.00	5,885.00	880.00	3,567.00
....	....	....	....	59.65	....	216.13
18,208.07	9,362.47	5,711.10	21,902.76	53,142.25	9,370.76	45,116.20
280.21	1,032.54	194.17	3,064.61	1,953.01	2,633.69	1,885.05
....	....	....	....	....	....	....
384	93	130	392	1,165	277	760
95	33	45	103	192	80	181
9	36	3	12	24	5	68
488	162	178	507	1,381	362	1,009

STATEMENT

Detailed Operating Reports of Electrical Departments of

NIAGARA
SYSTEM—**Continued**

Municipality Population	Plattsville P.V.	Point Edward 1,177	Port Colborne 6,503	Port Credit 1,901	Port Dalhousie 1,590
EARNINGS	$ c.	$ c.	$ c.	$ c.	$ c.
Domestic service	2,490.26	5,842.74	30,157.84	14,810.88	15,699.86
Commercial light service	1,054.21	2,254.64	17,241.82	6,718.56	3,402.95
Commercial power service	1,128.63	30,904.93	15,823.86	3,218.64	5,358.27
Municipal power	....	....	6,856.53	1,077.27	....
Street lighting	408.00	1,666.34	8,336.37	2,669.60	1,578.00
Merchandise	....	78.16	1,434.42	....	....
Miscellaneous	59.80	520.00	1,116.83	403.93	750.52
Total earnings	5,140.90	41,266.81	80,967.67	28,898.88	26,789.60
EXPENSES					
Power purchased	3,651.32	36,620.05	40,901.59	20,284.17	17,735.61
Substation operation	....	....	....	....	....
Substation maintenance	....	....	....	....	....
Distribution system, operation and maintenance	9.23	256.06	3,286.30	1,360.80	2,229.73
Line transformer maintenance	....	....	1,059.50	167.30	2.40
Meter maintenance	3.50	327.29	2,324.71	142.37	448.10
Consumers' premises expenses	....	5.38	79.32	864.98	772.70
Street lighting, operation and maintenance	18.10	189.83	2,060.42	446.58	330.87
Promotion of business	....	61.20	46.63	....	53.30
Billing and collecting	232.88	604.78	2,170.48	982.95	920.69
General office, salaries and expenses	18.02	987.23	3,558.21	293.06	1,301.08
Undistributed expenses	6.22	20.70	218.11	100.52	59.00
Truck operation and maintenance	....	....	910.59	....	362.63
Interest	86.47	269.53	2,829.75	332.77	391.62
Sinking fund and principal payments on debentures	254.20	614.62	9,274.81	717.08	513.27
Depreciation	333.00	1,291.00	5,354.00	1,859.00	1,156.00
Other reserves	....	....	....	154.88	150.00
Total operating costs and fixed charges	4,612.94	41,247.67	74,074.42	27,706.46	26,427.00
Net surplus	527.96	19.14	6,893.25	1,192.42	362.60
Net loss	....	....	....	....	....
NUMBER OF CONSUMERS					
Domestic service	109	305	1,492	515	620
Commercial light service	24	44	249	93	55
Power service	1	10	24	8	14
Total	134	359	1,765	616	689

"B"—Continued

Hydro Municipalities for Year Ended December 31, 1939

Port Dover 1,705	Port Rowan 556	Port Stanley *741	Preston 6,422	Princeton P.V.	Queenston P.V.	Richmond Hill 1,317
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
8,789.84	3,084.17	13,025.42	31,794.80	2,425.10	3,271.93	8,538.59
4,840.75	2,288.18	4,393.73	19,482.98	884.12	1,113.03	4,141.81
4,459.39	104.73	3,320.71	42,271.52	1,759.85	....	1,709.12
....	....	780.15	993.00	....	....	383.90
2,712.12	867.16	2,452.30	5,523.67	468.00	312.03	1,470.00
....	40.80	....	....	....	....	....
112.62	70.00	418.60	644.53	67.71	32.00	8.76
20,914.72	6,455.04	24,390.91	100,710.50	5,604.78	4,728.99	16,252.18
11,465.47	2,809.40	15,499.80	72,135.47	4,162.22	2,601.83	11,310.15
....	....	....	4,584.83	....	....	....
....	....	....	....	....	....	....
2,056.44	118.18	2,578.12	2,624.36	173.44	112.28	1,168.85
193.83	9.15	17.90	185.81	....	26.15	....
386.47	208.01	372.37	666.08	.40	6.75	127.24
68.21	....	215.30	33.22	....	91.34	238.94
428.83	80.19	215.27	400.44	91.95	22.85	298.45
60.00	....	322.50	....	....	....	....
736.37	202.98	923.79	1,709.87	196.80	129.12	691.35
809.18	42.05	855.15	2,533.63	57.68	131.10	338.41
181.09	6.68	87.43	967.01	....	6.14	23.40
71.87	....	415.63	338.05	....	....	....
201.41	391.38	133.07	1,426.76	58.61	142.53	66.12
1,629.46	567.65	1,100.60	4,196.61	172.32	656.03	410.01
1,704.00	432.00	1,615.00	9,973.00	304.00	435.00	697.00
....	....	....	....	....	....	....
19,992.63	4,867.67	24,351.93	101,775.14	5,217.42	4,361.12	15,369.92
922.09	1,587.37	38.98	....	387.36	367.87	882.26
....	....	....	1,064.64	....	....	....
632	136	697	1,526	87	77	367
119	44	100	227	20	13	68
16	3	9	46	3	....	13
767	183	806	1,799	110	90	448

*Winter population 741. Summer population estimated 3,500.

STATEMENT

Detailed Operating Reports of Electrical Departments of

NIAGARA SYSTEM—Continued

Municipality	Ridgetown	Riverside	Rockwood	Rodney	St. Catharines
Population	1,958	5,090	P.V.	695	27,647
EARNINGS	$ c.	$ c.	$ c.	$ c.	$ c.
Domestic service	8,710.57	37,741.62	3,846.70	3,370.91	134,293.12
Commercial light service	7,055.04	4,590.50	1,040.49	2,644.84	66,906.72
Commercial power service	3,253.66	3,195.20	319.35	1,915.25	158,022.59
Municipal power	988.62	2,638.30	....	....	....
Street lighting	3,534.79	3,567.74	789.75	1,285.71	26,669.12
Merchandise	182.88	....	....	....	....
Miscellaneous	415.29	1,091.96	24.08	2.74	6,958.31
Total earnings	24,140.85	52,825.32	6,020.37	9,219.45	392,849.86
EXPENSES					
Power purchased	16,315.95	26,994.88	3,775.20	6,531.98	283,855.40
Substation operation	....	....	....	....	5,627.73
Substation maintenance	....	....	....	....	....
Distribution system, operation and maintenance	945.66	2,048.45	129.83	295.73	13,580.80
Line transformer maintenance	18.05	238.66	....	35.65	1,722.87
Meter maintenance	604.49	563.19	87.68	286.91	5,625.67
Consumers' premises expenses	498.08	635.23	30.00	....	2,757.62
Street lighting, operation and maintenance	801.01	604.99	55.40	208.58	2,800.92
Promotion of business	....	231.00	....	....	1,006.99
Billing and collecting	1,099.99	2,183.75	....	325.44	12,151.36
General office, salaries and expenses	916.36	3,336.49	564.06	402.96	9,594.91
Undistributed expenses	93.78	440.41	....	24.92	4,871.81
Truck operation and maintenance	....	518.24	....	....	1,111.43
Interest	290.68	1,606.98	96.02	....	7,909.90
Sinking fund and principal payments on debentures	507.35	5,333.74	106.38	....	5,568.29
Depreciation	1,673.00	4,565.00	547.00	542.00	22,015.00
Other reserves	....	....	....	79.31	2,000.00
Total operating costs and fixed charges	23,764.40	49,301.01	5,391.57	8,733.48	382,200.70
Net surplus	376.45	3,524.31	628.80	485.97	10,649.16
Net loss	....	....	....	....	....
NUMBER OF CONSUMERS					
Domestic service	568	1,342	162	244	6,996
Commercial light service	142	55	34	79	866
Power service	20	8	2	6	160
Total	730	1,405	198	329	8,022

"B"—Continued

Hydro Municipalities for Year Ended December 31, 1939

St. Clair Beach 108	St. George P.V.	St. Jacobs P.V.	St. Marys 4,033	St. Thomas 16,352	Sarnia 18,269	Scarboro Twp.
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
2,172.80	3,168.32	3,943.63	27,377.56	120,555.72	92,171.80	112,683.60
2,357.41	1,525.11	1,642.93	10,777.40	53,457.20	49,454.90	23,451.65
304.54	2,438.87	4,745.55	19,206.52	53,289.37	143,827.36	11,167.91
....	....	....	3,451.02	5,355.74	4,892.92	13,323.05
....	427.91	430.00	4,890.50	14,905.92	20,424.23	15,713.43
....	....	....	....	....	419.44	....
132.00	148.84	185.49	721.07	3,837.78	9,674.54	....
4,966.75	7,709.05	10,947.60	66,424.07	251,401.73	320,865.19	176,339.64
3,053.84	4,738.38	8,454.03	41,254.47	178,331.48	224,045.86	90,307.73
....	....	....	1,665.50	7,827.36	9,078.48	....
....	....	....	696.50	1,315.19	157.29	....
312.50	204.14	90.09	3,991.62	7,235.83	8,091.54	6,147.44
8.10	68.57	23.85	73.66	445.95	416.72	1,494.55
65.65	167.15	36.08	2,058.87	3,048.23	4,719.65	2,077.12
111.10	....	88.46	1,230.40	7,115.28	2,348.49	2,044.00
....	148.06	50.10	1,081.92	3,283.48	7,075.23	1,682.24
....	....	....	625.23	2,713.81	4,714.65	....
217.56	464.07	439.62	1,254.22	5,159.31	8,660.58	6,025.21
130.12	107.04	159.04	2,239.64	9,686.66	12,282.92	4,629.94
....	12.68	2.56	535.37	4,703.94	5,739.33	1,600.47
....	....	....	785.85	1,493.80	1,392.36	1,424.71
112.71	113.90	....	1,571.51	79.31	2,365.37	6,187.12
500.84	298.93	....	2,865.99	....	16,325.38	17,048.90
410.00	401.00	435.00	5,552.00	16,587.00	21,486.00	14,083.00
....	....	....	200.00	....	....	....
4,922.42	6,723.92	9,778.83	67,682.75	249,026.63	328,899.85	154,752.43
44.33	985.13	1,168.77	....	2,375.10	....	21,587.21
....	....	....	1,258.68	....	8,034.66	....
73	150	132	1,025	4,310	4,732	5,029
8	35	31	170	627	666	353
1	2	7	40	81	81	33
82	187	170	1,235	5,018	5,479	5,415

STATEMENT

Detailed Operating Reports of Electrical Departments of

NIAGARA SYSTEM—Continued

Municipality	Seaforth	Simcoe	Springfield	Stamford Twp.	Stouffville
Population	1,705	6,052	P.V.		1,160
EARNINGS	$ c.	$ c.	$ c.	$ c.	$ c.
Domestic service	10,255.34	25,954.71	1,828.88	57,418.11	7,132.99
Commercial light service	6,475.62	30,085.80	842.15	10,947.73	3,517.58
Commercial power service	3,580.39	26,467.82	830.35	13,025.76	962.95
Municipal power	583.38	2,201.89	....	1,342.41	....
Street lighting	2,107.50	4,986.96	611.50	7,857.75	1,524.00
Merchandise	137.80	....	....	1,313.51	....
Miscellaneous	42.77	2,629.03	55.75	1,357.97	408.80
Total earnings	23,182.80	92,326.21	4,168.63	93,263.24	13,546.32
EXPENSES					
Power purchased	15,187.99	54,313.12	2,423.72	39,413.11	8,185.95
Substation operation	87.51	1,036.29	....	....	....
Substation maintenance	....	....	....	1,586.28	....
Distribution system, operation and maintenance	1,195.99	5,343.96	47.82	6,344.72	648.72
Line transformer maintenance	43.84	341.08	....	63.72	....
Meter maintenance	433.63	1,945.97	68.89	1,863.73	27.98
Consumers' premises expenses	387.61	357.72	....	2,125.50	94.29
Street lighting, operation and maintenance	355.76	931.61	18.75	1,307.75	158.44
Promotion of business	238.43	726.04	....	699.35	....
Billing and collecting	979.06	2,071.90	386.89	2,223.88	552.82
General office, salaries and expenses	1,071.54	2,860.46	53.23	4,641.40	244.65
Undistributed expenses	188.82	244.17	....	1,025.88	....
Truck operation and maintenance	274.61	909.44	....	1,572.52	....
Interest	....	1,953.89	143.98	5,593.10	14.54
Sinking fund and principal payments on debentures	....	4,008.02	232.58	12,092.02	264.41
Depreciation	2,297.00	4,715.00	390.00	7,670.00	676.00
Other reserves	....	5,000.00	....	....	....
Total operating costs and fixed charges	22,741.79	86,758.67	3,765.86	88,222.96	10,867.80
Net surplus	441.01	5,567.54	402.77	5,040.28	2,678.52
Net loss	....	....	....	....	....
NUMBER OF CONSUMERS					
Domestic service	473	1,526	108	1,895	386
Commercial light service	118	375	35	155	84
Power service	14	41	3	17	5
Total	605	1,942	146	2,067	475

"B"—Continued

Hydro Municipalities for Year Ended December 31, 1939

Stratford 17,159	Strathroy 2,917	Streetsville 700	Sutton 852	Swansea 5,831	Tavistock 1,063	Tecumseh 2,237	Thamesford P.V.
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
130,293.56	20,285.22	4,655.51	8,400.59	71,445.82	7,458.62	12,646.47	3,138.98
55,393.78	12,142.22	1,527.14	4,264.66	7,662.27	3,283.77	4,367.60	1,812.19
51,087.89	9,661.05	3,015.07	946.38	13,672.28	8,544.49	1,893.55	1,866.41
8,839.63	1,893.88	....	....	2,410.56	381.01	....	....
16,887.79	4,078.79	1,005.50	2,148.85	3,750.20	1,317.60	1,299.00	528.00
189.19	75.39	....	....	....	....	....	....
9,341.86	1,613.76	600.69	1.33	877.36	171.36	335.96	432.01
272,033.70	49,750.31	10,803.91	15,761.81	99,818.49	21,156.85	20,542.58	7,777.59
177,429.98	33,024.62	4,094.75	9,187.55	65,745.34	16,595.57	9,424.37	6,142.05
4,471.60	568.45	1,112.25	....	....	....	....	....
1,859.32	....	....	....	....	....	....	....
5,208.55	1,749.56	757.86	324.16	1,834.13	978.71	1,168.45	302 11
736.53	219.21	25.00	....	221.37	....	174.01	....
2,471.04	626.67	61.40	55.94	677.09	64.45	634.67	27.14
3,090.47	1,085.71	....	200.25	1,494.85	281.94	217.00	65 25
3,264.82	947.05	391.94	99.06	344.66	173.13	319.10	62 86
2,133.31	692.55	163.99	....	7.75	....	....	40.00
6,124.06	1,001.78	768.22	546.90	3,069.02	615.45	1,134.82	270.41
8,952.00	2,958.24	452.45	237.16	2,718.23	362.79	1,156.41	110.46
2,762.18	579.07	33.48	90.18	354.98	31.42	34 15	....
2,066.37	1,001.70	....	327.34	808.55	....	536.17	....
17,775.00	1,353.05	608.75	459.94	3,720.42	126.14	431.16	59.27
8,338.99	1,971.93	514.64	1,856.75	4,133.43	264.17	1,930.65	154 01
24,975.00	4,047.00	724.00	1.092.00	4,839.00	1,113.00	1,768.00	526 00
300.00	....	25.00	....	200.00	....	....	....
271,959.22	51,826.59	9,733.73	14,477.23	90,168.82	20,606.77	18,928.96	7,759.56
74.48	....	1,070.18	1,284.58	9,649.67	550 08	1,613.62	18 03
....	2,076.28	....	....	....	....	....	....
4,295	830	188	434	1,855	292	579	134
602	180	43	84	84	91	53	44
116	29	4	3	13	8	3	7
5,013	1,039	235	521	1,952	391	635	185

STATEMENT

Detailed Operating Reports of Electrical Departments of

NIAGARA SYSTEM—Continued

Municipality	Thamesville	Thedford	Thorndale	Thorold	Tilbury
Population	833	595	P.V.	5,001	1,980
EARNINGS	$ c.	$ c.	$ c.	$ c.	$ c.
Domestic service	3,651.80	3,148.65	1,734.04	19,030.70	6,518.04
Commercial light service	3,118.06	2,131.15	849.72	7,517.17	7,687.30
Commercial power service	1,440.40	1,007.32	1,091.51	38,142.34	8,058.45
Municipal power	215.27	....	....	1,790.45	225.00
Street lighting	1,367.98	1,050.00	384.00	3,488.42	1,809.89
Merchandise	....	....	....	....	.21
Miscellaneous	277.55	125.47	33.37	1,366.16	644.76
Total earnings	10,071.06	7,462.59	4,092.64	71,335.24	24,943.65
EXPENSES					
Power purchased	6,970.11	4,139.70	2,338.84	46,977.71	16,660.43
Substation operation	....	....	....	3,193.24	....
Substation maintenance	....	....	....	....	....
Distribution system, operation and maintenance	565.92	182.03	46.28	1,501.42	1,212.28
Line transformer maintenance	22.04	....	....	269.53	11.75
Meter maintenance	381.06	33.50	....	569.56	468.19
Consumers' premises expenses	51.10	....	....	266.67	....
Street lighting, operation and maintenance	266.90	99.65	32.10	685.37	193.10
Promotion of business	15.00	....	....	....	46.60
Billing and collecting	287.02	237.40	77.58	1,525.32	593.17
General office, salaries and expenses	310.41	85.61	27.58	1,459.72	1,130.90
Undistributed expenses	38.79	5.97	....	118.61	169.06
Truck operation and maintenance	....	....	....	398.32	204.62
Interest	....	230.71	45.95	....	215.34
Sinking fund and principal payments on debentures	....	1,207.84	116.68	....	512.14
Depreciation	862.00	487.00	299.00	3,349.00	1,349.00
Other reserves	41.05	....	....	....	....
Total operating costs and fixed charges	9,811.40	6,709.41	2,984.01	60,314.47	22,766.58
Net surplus	259.66	753.18	1,108.63	11,020.77	2,177.07
Net Loss	....	....	....	....	....
NUMBER OF CONSUMERS					
Domestic service	236	150	71	1,169	457
Commercial light service	81	51	23	162	131
Power service	7	3	2	17	12
Total	324	204	96	1,348	600

*As in the case of other municipalities listed in Statements "A" and "B", the figures for Toronto give effect to the annual adjustment of the cost of power for the year ended October 31, 1939.

In the case of Toronto this adjustment is a credit balance of $56,605.16. In the reports

"B"—Continued

Hydro Municipalities for Year Ended December 31, 1939

Tillsonburg 3,945	Toronto 647,803	Toronto Twp.	Trafalgar Twp. Area No. 1	Trafalgar Twp. Area No. 2	Wallaceburg 4,715	Wardsville 236
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
18,775.86	4,450,367.25	68,504.83	14,522.60	5,499.47	19,231.93	1,373.34
17,545.74	3,000,452.32	21,459.14	856.85	....	12,712.65	1,105.23
9,804.01	3,853,275.52	10,447.18	623.67	....	56,048.93	43.26
1,609.95	1,204,547.26	....	....	....	1,597.32	....
5,064.66	509,960.02	4,922.88	‡2,205.84	....	4,634.67	720.00
1,208.34	....	....	....	....	826.09	....
608.43	291,699.17	1,215.70	370.38	212.32	1,503.56	50.00
54,616.99	13,310,301.54	106,549.73	18,579.34	5,711.79	96,555.15	3,291.83
34,857.87	*7,022,047.39	65,708.69	10,990.54	3,624.29	70,020.95	1,706.34
1,095.89	198,006.70	....	....	....	317.80	....
....	295,694.56	....	....	....	....	....
2,730.69	331,207.50	5,542.39	2,284.24	140.76	2,903.03	116.33
136.78	38,979.38	352.21	....	....	345.74	....
88.24	120,931.71	1,150.77	24.70	57.15	817.06	20.15
111.61	234,965.95	1,750.40	....	....	11.75	38.97
971.28	116,034.98	934.98	....	....	624.47	56.36
327.54	163,894.10	....	....	....	55.75	....
1,475.90	424,865.79	4,514.63	....	....	3,028.03	127.67
3,316.04	345,844.37	5,320.95	1,483.83	649.66	2,991.46	58.17
167.46	†242,967.69	266.72	92.14	....	985.53	15.80
560.06	....	1,730.37	529.15	....	589.16	....
593.72	1,057,160.73	1,928.48	393.07	520.38	1,631.87	112.50
1,344.94	1,389,612.21	6,004.86	1,280.52	....	3,845.77	585.61
4,147.00	1,013,043.98	11,258.00	1,435.00	432.00	5,947.00	314.00
....	....	500.00	....	....	....	25.22
51,925.02	12,995,257.04	106,963.45	18,513.19	5,424.24	94,115.37	3,177.12
2,691.97	315,044.50	....	66.15	287.55	2,439.78	114.71
....	....	413.72	....	....	....	....
1,170	165,660	2,397	362	158	1,132	56
261	25,397	206	4	....	251	26
35	5,058	39	8	....	38	1
1,466	196,115	2,642	374	158	1,421	83

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issued by the Toronto Hydro-Electric System, such adjustment will be made in the subsequent year in accordance with The Hydro-Electric Power Commission's general authorization dated January 25, 1940.

†Includes $97,000.00 provision for possible York Twp. profit. ‡Highway lighting.

STATEMENT

Detailed Operating Reports of Electrical Departments of

NIAGARA
SYSTEM—Continued

Municipality	Water-down	Waterford	Waterloo	Watford	Welland
Population	904	1,216	8,524	964	11,072
EARNINGS	$ c.	$ c.	$ c.	$ c.	$ c.
Domestic service	4,942.40	6,038.51	59,606.94	6,890.76	54,828.34
Commercial light service	1,780.99	2,734.28	25,685.59	3,155.54	32,956.71
Commercial power service	1,191.35	5,144.81	33,269.61	3,113.49	98,498.10
Municipal power	86.84	264.95	3,734.65	287.64	1,654.57
Street lighting	936.00	1,488.00	7,779.70	1,626.16	11,323.13
Merchandise	....	....	383.71	58.56	....
Miscellaneous	71.95	263.19	2,027.63	433.01	5,914.58
Total earnings	9,009.53	15,933.74	132,487.83	15,565.16	205,175.43
EXPENSES					
Power purchased	5,903.36	10,871.27	95,937.82	10,385.46	109,489.77
Substation operation	....	....	2,200.00	....	6,050.86
Substation maintenance	....	....	557.56	....	101.62
Distribution system, operation and maintenance	307.14	1,107.86	5,272.21	1,159.26	5,250.00
Line transformer maintenance	....	72.20	14.94	....	650.68
Meter maintenance	191.05	291.81	1,348.49	86.53	2,931.35
Consumers' premises expenses	....	187.06	2,014.12	454.45	1,310.60
Street lighting, operation and maintenance	198.56	238.02	1,900.25	50.98	1,772.51
Promotion of business	....	....	110.00	....	1,585.36
Billing and collecting	522.88	549.76	3,353.63	536.26	4,004.75
General office, salaries and expenses	184.94	464.46	2,739.68	748.29	8,651.36
Undistributed expenses	29.15	100.97	276.06	41.34	489.36
Truck operation and maintenance	....	....	621.97	136.36	1,597.62
Interest	....	....	1,407.45	....	9,738.93
Sinking fund and principal payments on debentures	....	....	5,543.61	....	8,718.37
Depreciation	949.00	1,205.00	10,836.00	1,012.00	15,216.53
Other reserves	....	....	136.17	65.80	1,000.00
Total operating costs and fixed charges	8,286.08	15,088.41	134,269.96	14,676.73	178,559.67
Net surplus	723.45	845.33	....	888.43	26,615.76
Net loss	....	....	1,782.13	....	....
NUMBER OF CONSUMERS					
Domestic service	243	368	2,036	286	2,546
Commercial light service	38	79	260	79	486
Power service	7	12	71	5	84
Total	288	459	2,367	370	3,116

"B"—Continued

Hydro Municipalities for Year Ended December 31, 1939

Wellesley	West Lorne	Weston	Wheatley	Windsor	Woodbridge	Woodstock
P.V.	837	5,099	760	103,813	830	11,418
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
2,371.01	3,074.88	47,014.71	4,076.09	694,025.14	6,869.14	72,433.51
1,546.83	1,985.14	11,041.59	3,386.36	352,996.44	2,216.57	42,872.56
1,207.13	1,604.92	43,905.58	2,231.24	509,851.66	6,887.11	77,281.46
....	....	426.68	435.08	20,101.36	614.82	2,955.07
660.00	1,060.02	7,303.26	1,496.12	103,365.38	1,114.99	8,500.73
....	....	....	....	....	....	....
40.20	18.18	693.25	222.00	985.71	35.39	4,125.10
5,825.17	7,743.14	110,385.07	11,846.89	1,681,325.69	17,738.02	208,168.43
3,689.48	4,431.34	84,180.94	6,440.46	927,554.44	12,910.78	158,085.59
....	....	455.72	....	34,498.20	....	2,749.76
....	....	....	....	15,112.73	....	124.02
107.66	203.73	4,432.27	792.08	40,222.32	172.24	4,603.07
....	....	160.07	....	8,390.46	....	....
27.50	148.37	837.49	216.92	27,251.01	20.70	3,011.83
....	62.04	1,995.64	62.38	56,935.09	134.88	1,888.55
55.07	169.13	1,164.89	479.44	37,662.83	102 86	2,545.66
2.50	....	....	59.12	31,660.36	....	2,484.42
253.20	552.09	968.64	487.86	54,270.68	....	3,777.88
228.31	152.07	3,073.88	138.97	43,418.04	729.49	6,150.39
10.21	2.40	410.44	59.22	20,659.58	....	1,953.25
....	....	434.09	....	....	....	702.80
....	....	1,382.45	255.45	35,841.48	279.57	859.73
....	....	4,133.08	832.34	134,984.70	402.03	342.45
398.00	774.00	6,249.00	759.00	121,132.00	1,000.00	15,692.00
....	33.32	....	48.46	....	....	....
4,771.93	6,528.49	109,878.60	10,631.70	1,589,593.92	15,752.55	204,971.40
1,053.24	1,214.65	506.47	1,215.19	91,731.77	1,985.47	3,197.03
....	....	....	....	....	....	....
128	214	1,365	228	23,557	289	3,179
49	48	179	71	3,165	51	482
4	5	29	5	450	7	95
181	267	1,573	304	27,172	347	3,756

STATEMENT

Detailed Operating Reports of Electrical Departments of

NIAGARA SYSTEM—Concluded

Municipality	Wyoming	*York Twp.	Zurich	NIAGARA SYSTEM SUMMARY
Population	516		P.V.	
EARNINGS	$ c.	$ c.	$ c.	$ c.
Domestic service	2,403.29	487,307.56	3,126.35	10,341,906.07
Commercial light service	1,486.50	76,318.86	2,664.64	5,637,619.34
Commercial power service	351.32	100,080.73		9,068,785.10
Municipal power		7,127.16		1,590,100.13
Street lighting	780.00	44,793.74	693.00	1,408,246.16
Merchandise				16,694.49
Miscellaneous	18.44	18,709.48	130.00	495,375.34
Total earnings	5,039.55	734,337.53	6,613.99	28,558,726.63
EXPENSES				
Power purchased	2,905.16		4,212.09	17,216,244.76
Substation operation				419,332.13
Substation maintenance				359,065.73
Distribution system, operation and maintenance	104.70		106.32	736,371.37
Line transformer maintenance				79,031.49
Meter maintenance	169.10	†605,580.85	84.94	306,364.10
Consumers' premises expenses				448,685.69
Street lighting, operation and maintenance	159.94		61.49	282,230.92
Promotion of business				291,051.36
Billing and collecting	239.98		221.07	815,728.96
General office, salaries and expenses	84.95		107.65	761,630.58
Undistributed expenses	9.74		13.22	390,363.23
Truck operation and maintenance				56,695.47
Interest		12,519.09	149.13	1,448,451.39
Sinking fund and principal payments on debentures		25,247.55	240.87	2,244,851.41
Depreciation	457.00	24,671.00	489.00	2,024,001.22
Other reserves				17,163.30
Total operating costs and fixed charges	4,130.57	668,018.49	5,685.78	27,897,263.11
Net surplus	908.98	66,319.04	928.21	661,463.52
Net loss				
NUMBER OF CONSUMERS				
Domestic service	147	19,289	135	404,729
Commercial light service	48	1,097	46	59,050
Power service	3	150		10,620
Total	198	20,536	181	474,399

*For year 1938. Included in Toronto figures. Not added in Summary.
†Toronto Operating Costs.

"B"—Continued

Hydro Municipalities for Year Ended December 31, 1939

GEORGIAN BAY SYSTEM

Alliston	Arthur	Barrie	Beaverton	Beeton	Bradford	Brechin
1,405	1,017	8,310	955	571	989	P.V.
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
9,905.36	5,353.71	62,664.44	6,069.35	3,522.56	6,216.75	1,247.35
6,896.12	4,856.10	40,292.89	2,692.69	2,056.38	3,985.33	1,021.65
2,446.04	610.97	17,968.70	1,350.84	995.95	2,246.29	821.96
699.54	519.70	1,046.34	....	....	298.34	....
1,977.50	1,462.50	6,002.10	1,297.82	1,264.00	1,072.00	476.50
....	....	51.85	....	....	....	....
33.12	....	829.11	907.45	34.50	53.62	....
21,957.68	12,802.98	128,855.43	12,318.15	7,873.39	13,872.33	3,567.46
13,839.95	9,681.34	108,135.73	8,708.21	5,229.99	8,768.71	2,285.45
....	....	825.24	....	....	....	....
....	....	64.05	....	....	....	....
621.94	661.43	5,533.61	305.42	241.77	353.09	232.52
....	....	1,047.01	....	....	....	....
42.20	35.00	878.86	25.03	....	73.00	....
453.78	....	169.94	111.03	....	7.57	....
413.53	110.58	720.55	300.10	116.91	173.01	161.22
....	....	2,024.37	....	....	....	....
789.24	....	4,920.09	595.66	131.32	503.62	....
447.51	438.93	2,651.30	434.46	134.82	229.95	197.31
38.76	20.25	358.00	8.12	....	51.01	....
....	....	655.42	....	....	....	....
1,136.85	769.55	1,087.54	170.83	378.49	815.43	180.47
2,011.12	1,016.31	1,744.00	709.70	599.04	1,195.11	134.70
1,603.00	1,155.00	8,777.00	1,376.00	724.00	1,081.00	180.00
28.06	....	2,152.31	....	17.60	75.00	25.00
21,425.94	13,888.39	141,745.02	12,744.56	7,573.94	13,326.50	3,396.67
531.74	....	....	....	299.45	545.83	170.79
....	1,085.41	12,889.59	426.41	....	....	....
370	214	2,152	328	133	243	33
109	87	422	67	34	68	22
14	6	50	9	4	8	4
493	307	2,624	404	171	319	59

STATEMENT

Detailed Operating Reports of Electrical Departments of

GEORGIAN BAY SYSTEM—Continued

Municipality Population	Cannington 756	Chatsworth 337	Chesley 1,743	Coldwater 612	Collingwood 5,322
EARNINGS	$ c.	$ c.	$ c.	$ c.	$ c.
Domestic service	5,321.50	1,868.85	8,790.72	3,550.73	27,523.92
Commercial light service	2,272.92	1,415.79	5,411.68	1,528.54	13,284.43
Commercial power service	512.08		6,102.33	5,997.63	13,393.18
Municipal power			620.20		1,520.87
Street lighting	1,144.69	533.00	1,377.10	873.00	3,808.03
Merchandise			180.49		
Miscellaneous	156.52	35.88	177.19	180.00	1,043.57
Total earnings	9,407.71	3,853.52	22,659.71	12,129.90	60,574.00
EXPENSES					
Power purchased	6,408.26	2,718.15	18,992.10	9,245.53	48,070.82
Substation operation					477.83
Substation maintenance					
Distribution system, operation and maintenance	654.85	118.01	555.10	476.07	1,729.15
Line transformer maintenance		86.93	52.59		382.35
Meter maintenance	205.55	10.99	204.68	127.90	1,220.02
Consumers' premises expenses	210.12		21.37	103.42	138.95
Street lighting, operation and maintenance	164.66	46.39	163.22	224.33	717.80
Promotion of business					
Billing and collecting	580.67		606.76	390.74	2,078.90
General office, salaries and expenses	199.81	321.59	768.82	173.93	1,015.87
Undistributed expenses		5.00	24.05		209.70
Truck operation and maintenance			15.50		393.83
Interest	241.71	8.07	5.15	123.09	
Sinking fund and principal payments on debentures	845.51	113.99		368.53	
Depreciation	866.00	317.00	1,713.00	694.00	4,724.00
Other reserves				30.00	250.00
Total operating costs and fixed charges	10,377.14	3,746.12	23,122.34	11,957.54	61,409.22
Net surplus		107.40		172.36	
Net loss	969.43		462.63		835.22
NUMBER OF CONSUMERS					
Domestic service	250	87	432	160	1,382
Commercial light service	67	35	102	49	191
Power service	10		21	3	54
Total	327	122	555	212	1,627

"B"—Continued

Hydro Municipalities for Year Ended December 31, 1939

Cookstown P.V.	Creemore 615	Dundalk 700	Durham 1,864	Elmvale P.V.	Elmwood P.V.	Flesherton 455
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
2,254.81	2,910.21	3,176.45	6,979.40	3,641.26	1,245.14	2,561.14
1,485.00	1,987.61	2,860.62	5,121.51	1,738.24	670.34	1,925.25
861.74	1,012.35	2,861.53	3,307.79	2,449.30	1,095.54	544.91
			642.17	140.28		
855.00	744.00	1,230.00	1,616.00	790.50	442.58	626.60
134.13	90.00	135.00	383.52	145.70	100.64	123.95
5,590.68	6,744.17	10,263.60	18,050.39	8,905.28	3,554.24	5,781.85
3,239.27	5,344.98	7,919.39	12,623.87	6,249.84	2,353.16	2,930.18
183.38	194 82	630.56	929.02	506.74	51.64	135.19
			3.75			
66.42		20.60	87.47	99.26		45.15
		38.37	72.21	117.40		7.46
60.60	123.06	302.71	271.40	159.75	21.40	65.42
			8.23			
245.46	233.62		713.13	260.61		
67.37	46.31	916.75	782.02	220.77	199.88	457.12
6.27			66.41			
			223.97			
314.74	2.45			80.73		320.30
412.74				374.63		347.38
612.00	508.00	564.00	1,393.00	813.00	307.00	436.00
5,208.25	6,453.24	10,392.38	17,174.48	8,882.73	2,933.08	4,744.20
382.43	290.93		875.91	22.55	621.16	1,037.65
		128.78				
105	161	194	448	174	65	137
32	60	73	106	50	23	51
3	4	6	14	8	1	2
140	225	273	568	232	89	190

STATEMENT

Detailed Operating Reports of Electrical Departments of

GEORGIAN BAY SYSTEM—Continued

Municipality	Grand Valley	Gravenhurst	Hanover	Holstein	Huntsville
Population	605	2,135	3,215	P.V.	2,770
EARNINGS	$ c.	$ c.	$ c.	$ c.	$ c.
Domestic service	3,433.97	9,999.56	19,974.65	956.80	13,158.64
Commercial light service	2,162.78	8,082.09	8,233.93	642.09	10,519.68
Commercial power service	1,439.01	11,202.97	18,750.35	134.12	12,785.12
Municipal power		649.13	288.01		1,400.00
Street lighting	920.00	2,092.98	2,628.96	375.00	2,780.00
Merchandise		519.47	1.22		
Miscellaneous	198.78	211.62	1,618.43	67.50	708.26
Total earnings	8,154.54	32,757.82	51,495.55	2,175.51	41,351.70
EXPENSES					
Power purchased	7,091.62	24,507.47	34,940.80	1,262.51	33,331.59
Substation operation					
Substation maintenance					
Distribution system, operation and maintenance	290.39	2,654.54	2,054.73	68.10	2,286.11
Line transformer maintenance		222.03	50.05		
Meter maintenance	9.17	482.33	304.45	22.65	318.42
Consumers' premises expenses		524.73	139.10		273.21
Street lighting, operation and maintenance	177.64	514.58	188.84	17.96	550.20
Promotion of business					426.72
Billing and collecting		1,152.36	1,545.84		1,148.77
General office, salaries and expenses	700.85	292.20	997.63	188.50	1,550.79
Undistributed expenses		715.58	424.92		441.95
Truck operation and maintenance		341.57	94.85		199.43
Interest		293.19	621.29		32.70
Sinking fund and principal payments on debentures			2,333.22		235.40
Depreciation	676.00	2,599.00	4,101.00	144.00	1,578.00
Other reserves		150.00			842.48
Total operating costs and fixed charges	8,945.67	34,449.58	47,796.72	1,703.72	43,215.77
Net surplus			3,698.83	471.79	
Net loss	791.13	1,691.76			1,864.07
NUMBER OF CONSUMERS					
Domestic service	175	555	773	50	659
Commercial light service	54	131	137	22	146
Power service	4	14	23	1	13
Total	233	700	933	73	818

"B"—Continued

Hydro Municipalities for Year Ended December 31, 1939

Kincardine	Kirkfield	Lucknow	Markdale	Meaford	Midland	Mildmay
2,464	P.V.	1,034	781	2,811	6,669	754
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
15,935.33	956.03	6,364.73	3,787.61	13,470.10	37,212.45	3,410.06
9,025.96	1,100.47	3,919.42	2,776.21	7,945.83	17,381.86	2,206.89
10,496.80	....	4,198.45	1,034.69	4,970.02	46,107.08	928.97
1,427.42	....	453.80	66.73	1,052.30	2,778.36	....
4,297.00	480.00	1,610.00	920.00	3,040.92	6,376.00	699.04
....	....	....	....	....	....	....
....	....	110.60	165.78	803.26	2,244.64	139.28
41,182.51	2,536.50	16,657.00	8,751.02	31,282.43	112,100.39	7,384.24
27,121.77	1,506.43	11,125.53	6,555.63	20,959.22	91,563.76	4,769.74
353.00	....	....	....	....	2,043.12	....
....	....	....	....	....	379.86	....
1,899.20	169.21	137.74	370.54	2,199.82	4,586.89	141.67
....	....	126.50	43.65	53.41	21.55	....
113.51	....	89.30	63.55	173.27	1,025.15	139.45
224.41	....	....	74.98	48.59	338.28	149.38
460.70	75.20	124.89	62.92	544.19	756.18	91.39
10.49	....	....	....	....	1,479.97	....
690.99	....	....	....	670.92	2,396.16	....
916.14	134.37	1,078.08	541.54	813.77	1,687.43	408.75
142.71	....	64.92	....	183.21	1,160.02	....
187.92	....	....	....	164.96	389.36	....
682.04	44.58	305.24	219.00	1,222.66	....	497.68
4,454.71	493.46	1,346.07	434.84	4,161.69	....	547.10
2,716.00	260.00	943.00	722.00	1,686.00	11,937.00	283.00
177.29	25.00	....	....	....	....	....
40,150.88	2,708.25	15,341.27	9,088.65	32,881.71	119,764.73	7,028.16
1,031.63	....	1,315.73	....	....	....	356.08
....	171.75	....	337.63	1,599.28	7,664.34	....
672	30	247	220	686	1,540	169
119	20	80	81	143	205	50
17	....	6	11	18	50	3
808	50	333	312	847	1,795	222

STATEMENT

Detailed Operating Reports of Electrical Departments of

GEORGIAN BAY SYSTEM—Continued

Municipality	Mount Forest	Neustadt	Orangeville	Owen Sound	Paisley
Population	1,840	455	2,660	13,411	729
EARNINGS	$ c.	$ c.	$ c.	$ c.	$ c.
Domestic service	8,967.74	2,104.67	15,420.02	61,028.31	4,090.42
Commercial light service	7,481.45	1,069.82	10,416.16	41,539.35	2,738.15
Commercial power service	4,562.77	405.24	5,268.55	43,974.55	768.44
Municipal power	908.75	....	1,110.34	408.46	....
Street lighting	2,171.25	780.00	2,793.30	11,784.50	1,170.00
Merchandise	....	....	105.94	1,223.46	....
Miscellaneous	202.07	126.48	434.05	1,331.87	148.43
Total earnings	24,294.03	4,486.21	35,548.36	161,290.50	8,915.44
EXPENSES					
Power purchased	21,178.37	1,658.47	26,970.14	130,938.78	5,860.94
Substation operation	....	....	....	....	....
Substation maintenance	....	....	....	3,896.42	....
Distribution system, operation and maintenance	737.44	180.50	1,298.53	5,323.06	460.88
Line transformer maintenance	....	....	36.28	1,491.20	....
Meter maintenance	162.15	....	234.25	1,796.02	92.20
Consumers' premises expenses	....	....	399.89	29.33	....
Street lighting, operation and maintenance	286.32	61.83	506.66	1,805.37	76.71
Promotion of business	....	....	....	711.22	....
Billing and collecting	755.92	....	923.27	5,555.09	....
General office, salaries and expenses	119.34	288.91	678.36	5,716.90	495.06
Undistributed expenses	40.78	....	67.73	2,127.77	....
Truck operation and maintenance	145.17	....	....	1,015.54	....
Interest	430.01	59.89	165.62	....	315.01
Sinking fund and principal payments on debentures	875.23	465.55	93.79	....	1,024.41
Depreciation	1,592.00	714.00	2,397.00	8,458.00	633.00
Other reserves	....	....	....	730.22	....
Total operating costs and fixed charges	26,322.73	3,429.15	33,771.52	169,594.92	8,958.21
Net surplus	....	1,057.06	1,776.84	....	....
Net loss	2,028.70	....	....	8,304.42	42.77
NUMBER OF CONSUMERS					
Domestic service	489	98	745	3,373	202
Commercial light service	156	29	119	578	51
Power service	14	1	23	99	4
Total	659	128	887	4,050	257

"B"—Continued

Hydro Municipalities for Year Ended December 31, 1939

Penetanguishene 4,094	Port Elgin 1,321	Port McNicoll 905	Port Perry 1,128	Priceville P.V.	Ripley 442	Rosseau 305
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
12,037.33	9,523.92	4,103.29	7,447.92	792.02	3,242.20	2,776.97
6,703.71	5,908.92	662.63	3,269.46	315.88	1,710.68	1,035.80
16,178.45	2,579.67	43.09	2,287.01	79.81	1,306.71	....
2,392.57	764.30	....	315.86	....	....	....
2,291.00	2,732.72	938.00	1,665.00	480.00	1,073.14	1,410.00
....	....	....	....	....	....	....
95.61	312.14	....	499.18	1.11	....	19.45
39,698.67	21,821.67	5,747.01	15,484.43	1,668.82	7,332.73	5,242.22
27,767.72	15,564.86	3,233.46	12,041.84	506.15	4,533.24	3,112.57
479.91	....	....	....	....	....	....
....	....	....	....	....	....	....
2,547.68	935.25	469.26	818.86	197.82	106.54	291.41
306.81	118.11	....	....	....	16.81	....
729.06	137.73	158.05	241.40	....	91.40	72.80
659.27	233.62	....	....	....	....	....
275.72	286.27	148.82	202.83	23.31	63.51	50.96
....	....	....	....	....	....	....
1,181.61	652.26	461.98	770.79	....	....	221.14
891.37	256.83	258.37	379.99	81.69	466.55	122.87
168.21	41.10	50.00	....	....	15.11	....
290.62	152.87	....	....	....	....	....
301.35	1,493.53	35.93	668.86	57.53	481.89	660.89
2,192.84	1,876.67	172.80	1,060.35	465.57	541.57	472.93
3,524.00	1,140.00	482.00	1,043.00	231.00	543.00	295.00
....	....	....	....	....	....	....
41,316.17	22,889.10	5,470.67	17,227.92	1,563.07	6,859.62	5,300.57
....	....	276.34	....	105.75	473.11	....
1,617.50	1,067.43	....	1,743.49	....	....	58.35
662	448	220	340	36	120	62
107	113	20	81	10	49	22
24	6	1	12	1	1	....
793	567	241	433	47	170	84

STATEMENT

Detailed Operating Reports of Electrical Departments of

GEORGIAN BAY SYSTEM—Continued

Municipality	Shelburne	South-ampton	Stayner	Sunderland	Tara
Population	1,043	1,441	1,043	P.V.	474
EARNINGS	$ c.	$ c.	$ c.	$ c.	$ c.
Domestic service	5,633.39	10,079.86	4,811.51	2,712.02	3,185.14
Commercial light service	3,735.63	4,026.04	3,463.29	1,694.57	1,710.52
Commercial power service	2,170.69	2,393.77	1,907.19	259.10	1,343.70
Municipal power	227.62	1,117.60	....	....	....
Street lighting	875.25	2,456.68	1,130.00	720.00	1,168.00
Merchandise	....	....	....	....	....
Miscellaneous	340.00	14.21	174.10	14.70	.69
Total earnings	12,982.58	20,088.16	11,486.09	5,400.39	7,408.05
EXPENSES					
Power purchased	10,003.61	12,121.23	9,112.86	3,785.94	4,259.67
Substation operation	....	....	....	....	....
Substation maintenance	....	....	....	....	....
Distribution system, operation and maintenance	575.14	1,242.38	686.02	285.71	276.20
Line transformer maintenance	115.47	3.41	....	....	....
Meter maintenance	54.52	140.65	122.28	76.11	6.90
Consumers' premises expenses	....	150.33	13.21	....	....
Street lighting, operation and maintenance	86.21	223.78	194.55	118.54	80.49
Promotion of business	6.60	25.80	....	....	....
Billing and collecting	579.35	783.86	461.75	241.48	....
General office, salaries and expenses	108.51	459.95	421.86	133.85	591.61
Undistributed expenses	13.93	57.84	9.66	....	10.71
Truck operation and maintenance	....	240.06	....	....	....
Interest	22.17	812.93	....	....	70.42
Sinking fund and principal payments on debentures	396.23	1,474.50	....	....	601.46
Depreciation	1,171.00	1,083.00	1,086.00	364.00	682.00
Other reserves	....	....	....	....	....
Total operating costs and fixed charges	13,132.74	18,819.72	12,108.19	5,005.63	6,579.46
Net surplus	....	1,268.44	....	394.76	828.59
Net loss	150.16	....	622.10	....	....
NUMBER OF CONSUMERS					
Domestic service	301	502	271	116	151
Commercial light service	79	94	92	45	39
Power service	14	12	12	2	5
Total	394	608	375	163	195

"B"—Continued

Hydro Municipalities for Year Ended December 31, 1939

Teeswater 842	Thornton P.V.	Tottenham 557	Uxbridge 1,509	Victoria Harbor 1,023	Walkerton 2,463	Waubaushene P.V.
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
5,156.75	1,412.20	3,538.51	8,514.79	3,361.20	15,338.49	3,220.89
2,969.69	541.98	2,241.91	4,483.76	959.36	9,836.96	743.87
1,065.85	291.29	254.02	1,197.18	....	6,624.99	600.69
180.00	....	178.36	....	105.71	543.44	130.84
1,118.00	566.67	882.00	1,587.00	663.00	2,861.28	482.00
....	....	....	....	....	393.45	....
152.32	....	2.04	5.61	....	289.26	....
10,642.61	2,812.14	7,096.84	15,788.34	5,089.27	35,887.87	5,178.29
6,531.72	1,779.16	4,905.51	13,158.56	3,046.04	23,754.75	3,879.80
....	....	....	....	....	....	....
....	....	....	....	....	....	....
401.76	202.03	396.44	800.75	285.35	969.85	79.96
....	....	....	....	....	184.58	....
88.47	....	102.85	135.82	106.50	464.97	109.05
....	....	....	230.01	....	126.17	....
59.76	63.12	154.40	273.31	110.39	627.16	38.42
37.85	....	....	....	....	....	....
....	....	281.44	362.01	360.00	958.26	223.63
676.71	102.34	158.24	334.88	209.19	1,732.26	173.54
17.27	....	....	9.82	....	242.97	....
....	....	....	....	....	....	....
343.72	51.02	280.93	....	1.01	2,374.04	59.55
1,652.92	602.87	522.36	....	....	2,680.93	....
890.00	393.00	518.00	861.00	543.00	1,694.00	422.00
....	....	....	15.00	....	159.09	....
10,700.18	3,193.54	7,320.17	16,181.16	4,661.48	35,969.03	4,985.95
....	....	....	....	427.79	....	192.34
57.57	381.40	223.33	392.82	....	81.16	....
225	60	140	402	221	621	212
58	13	47	99	22	139	23
4	2	7	10	1	17	4
287	75	194	511	244	777	239

STATEMENT

Detailed Operating Reports of Electrical Departments of

GEORGIAN BAY SYSTEM—Concluded

Municipality Population	Wiarton 1,723	Windermere 118	Wingham 2,123	Woodville 421	GEORGIAN BAY SYSTEM SUMMARY
EARNINGS	$ c.	$ c.	$ c.	$ c.	$ c.
Domestic service	7,501.29	2,688.39	12,102.13	2,166.95	516,421.90
Commercial light service	8,143.65	1,126.15	8,021.17	1,104.77	313,155.63
Commercial power service	2,876.71	129.66	9,179.95	630.66	285,006.45
Municipal power	1,571.39		450.60		24,009.03
Street lighting	2,449.30	364.00	3,082.50	634.01	104,141.42
Merchandise			955.82		3,431.70
Miscellaneous	423.74		1,089.28	210.00	16,718.39
Total earnings	22,966.08	4,308.20	34,881.45	4,746.39	1,262,884.52
EXPENSES					
Power purchased	14,840.00	1,955.45	19,106.61	3,382.48	936,470.93
Substation operation			1,686.04		5,865.14
Substation maintenance					4,340.33
Distribution system, operation and maintenance	651.26	198.00	2,099.96	311.39	53,802.68
Line transformer maintenance					4,362.49
Meter maintenance	242.95	11.80	530.48	103.71	11,895.50
Consumers' premises expenses			17.60	31.30	5,115.03
Street lighting, operation and maintenance	399.98	44.75	404.85	67.02	14,616.37
Promotion of business					4,731.25
Billing and collecting	709.85	151.40	702.41	268.39	36,260.75
General office, salaries and expenses	552.60	59.41	2,350.49	141.04	36,977.29
Undistributed expenses	85.05		152.80		7,031.63
Truck operation and maintenance	160.91				4,671.98
Interest	1,490.93	510.26	1,752.42	88.84	22,082.53
Sinking fund and principal payments on debentures	1,515.74	521.49	1,734.85	322.97	45,147.28
Depreciation	903.00	378.00	3,763.00	271.00	91,562.00
Other reserves	46.30			125.00	4,848.35
Total operating costs and fixed charges	21,598.57	3,830.56	34,301.51	5,113.14	1,289,781.53
Net surplus	1,367.51	477.64	579.94		
Net loss				366.75	26,897.01
NUMBER OF CONSUMERS					
Domestic service	401	61	560	115	23,998
Commercial light service	117	13	150	33	5,234
Power service	17	1	25	2	702
Total	535	75	735	150	29,934

"B"—Continued

Hydro Municipalities for Year Ended December 31, 1939

EASTERN ONTARIO SYSTEM

Alexandria 1,971	Apple Hill P.V.	Arnprior 4,059	Athens 670	Bath 343	Belleville 14,589	Bloomfield 653
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
7,335.22	1,273.82	16,651.71	3,157.54	1,901.19	75,070.91	3,241.21
5,369.13	877.24	10,229.12	1,548.70	632.28	50,232.42	1,716.21
2,264.04	416.74	15,464.74	916.67		34,328.07	1,025.30
809.96		2,562.93			3,482.65	
1,944.33	477.30	3,084.38	1,055.00	525.00	10,340.78	704.00
		369.21			4,116.36	
464.05	15.25	257.94	136.03		2,797.92	81.22
18,186.73	3,060.35	48,620.03	6,813.94	3,058.47	180,369.11	6,767.94
9,694.36	1,675.18	30,111.64	4,399.67	1,639.98	143,380.57	4,470.93
					1,645.67	
900.17	156.31	1,043.27	289.27	61.80	2,583.55	49.54
70.15		132.52	167.19		455.69	
264.92	39.17	217.21			1,560.05	76.57
		347.71			54.46	
161.90	51.25	307.73	114.26	19.80	1,971.09	127.34
54.36		74.35			1,208.53	
1,041.90		3,068.35			3,693.00	
470.99	284.64	2,333.51	303.67	181.52	7,329.72	318.64
57.29		30.29			1,626.18	
398.28	91.95	2,510.22	487.00	397.91		287.36
3,103.76	431.15	1,769.13	685.84	296.58		572.82
1,645.00	206.00	1,123.00	570.00	232.00	8,692.00	626.00
17,863.08	2,935.65	43,068.93	7,016.90	2,829.59	174,200.51	6,529.20
323.65	124.70	5,551.10		228.88	6,168.60	238.74
			202.96			
363	56	763	172	50	3,314	170
115	24	139	45	10	643	43
12	2	20	1		100	7
490	82	922	218	60	4,057	220

STATEMENT

Detailed Operating Reports of Electrical Departments of

EASTERN ONTARIO SYSTEM—Continued

Municipality	Bowmanville	Brighton	Brockville	Cardinal	Carleton Place
Population	3,850	1,454	9,995	1,556	4,278
EARNINGS	$ c.	$ c.	$ c.	$ c.	$ c.
Domestic service	27,222.74	9,203.39	52,159.51	7,276.09	18,603.80
Commercial light service	10,003.12	4,255.87	24,894.11	2,405.82	9,275.63
Commercial power service	48,328.80	3,234.53	35,554.84	522.97	23,055.92
Municipal power	....	....	4,647.66	....	1,397.24
Street lighting	3,866.49	2,055.00	8,871.50	977.00	4,834.89
Merchandise	....	....	....	....	46.32
Miscellaneous	2,773.97	157.83	5,353.62	135.00	1,545.68
Total earnings	92,195.12	18,906.62	131,481.24	11,316.88	58,759.48
EXPENSES					
Power purchased	70,919.10	9,837.35	92,523.82	6,871.66	40,539.69
Substation operation	....	....	5,100.00	....	....
Substation maintenance	42.52	....	464.81	....	178.86
Distribution system, operation and maintenance	2,250.67	1,861.22	3,470.61	1,162.86	1,775.22
Line transformer maintenance	110.85	111.06	503.65	....	220.32
Meter maintenance	862.16	455.16	2,343.96	44.43	634.39
Consumers' premises expenses	623.85	284.11	35.36	2.01	240.05
Street lighting, operation and maintenance	411.80	219.77	1,375.89	265.15	516.42
Promotion of business	206.22	186.10	4.17	....	353.12
Billing and collecting	2,365.11	414.36	2,257.83	....	1,886.44
General office, salaries and expenses	2,446.43	1,116.50	5,016.19	624.43	3,447.26
Undistributed expenses	1,235.71	376.79	1,145.02	....	673.50
Truck operation and maintenance	....	322.83	762.18	....	475.23
Interest	1,007.03	643.44	....	513.28	1,754.57
Sinking fund and principal payments on debentures	3,050.74	1,125.23	....	670.24	3,418.18
Depreciation	2,737.00	758.00	11,189.00	504.00	2,472.00
Other reserves	....	....	....	50.00	....
Total operating costs and fixed charges	88,269.19	17,711.92	126,192.49	10,708.06	58,585.25
Net surplus	3,925.93	1,194.70	5,288.75	608.82	174.23
Net loss	....	....	....	....	....
NUMBER OF CONSUMERS					
Domestic service	1,161	511	2,843	371	1,010
Commercial light service	152	95	423	61	195
Power service	27	9	75	3	18
Total	1,340	615	3,341	435	1,223

"B"—Continued

Hydro Municipalities for Year Ended December 31, 1939

Chesterville	Cobden	Cobourg	Colborne	Deseronto	Finch	Hastings	Havelock
1,083	627	5,307	955	1,300	337	757	1,147
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
4,548.00	2,127.91	34,441.01	5,375.34	5,654.28	2,205.80	3,758.61	5,288.26
3,604.46	2,534.74	19,472.68	3,183.90	2,092.35	1,636.94	2,197.22	2,944.33
1,909.23	334.36	22,416.56	569.91	1,176.26	335.67	244.49	2,260.06
....	....	2,112.46	215.53	734.65	....	....	....
1,040.00	765.00	5,850.88	1,508.00	1,369.80	468.00	1,293.73	1,512.00
454.30	....	....	386.30	....	....	....	....
424.05	28.01	2,901.57	181.35	145.64	137.29	355.85	464.32
11,980.04	5,790.02	87,195.16	11,420.33	11,172.98	4,783.70	7,849.90	12,468.97
8,267.76	3,311.83	59,967.31	5,925.62	6,499.40	3,191.75	3,938.47	6,139.10
....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....
1,071.75	46.08	2,673.60	1,120.00	1,739.35	201.00	714.36	919.47
....	....	217.81	17.15	....	....	78.75	....
152.05	40.47	478.97	108.77	307.49	....	103.64	....
9.38	....	317.01	285.76	227.77	33.24	....	209.32
146.65	171.97	672.69	147.48	397.95	63.63	95.94	216.68
333.08	....	25.00	....	17.27	....	....	....
543.48	287.45	2,278.07	....	497.40	....	....	....
547.21	120.90	3,434.81	1,443.50	466.55	310.02	569.30	541.69
....	....	1,017.46	177.58	65.59	....	38.34	....
....	....	....	442.48	236.02	....	....	250.75
....	354.86	2,644.43	618.22	80.99	249.75	885.85	349.66
....	545.14	4,867.78	545.69	644.53	361.24	876.10	2,518.71
655.00	141.00	4,261.00	383.00	486.00	334.00	617.00	1,035.00
....	....	200.00	....	....	....	....	....
11,726.36	5,019.70	83,055.94	11,215.25	11,666.31	4,744.63	7,917.75	12,180.38
253.68	770.32	4,139.22	205.08	....	39.07	....	288.59
....	....	....	....	493.33	....	67.85	....
249	117	1,447	257	308	93	213	291
76	53	221	77	65	37	53	58
3	1	51	4	7	1	4	3
328	171	1,719	338	380	131	270	352

STATEMENT

Detailed Operating Reports of Electrical Departments of

EASTERN ONTARIO SYSTEM—Continued

Municipality	Kemptville	Kingston	Lakefield	Lanark	Lancaster
Population	1,218	23,355	1,308	723	511
EARNINGS	$ c.	$ c.	$ c.	$ c.	$ c.
Domestic service	7,103.67	139,065.46	5,925.37	2,693.77	2,071.61
Commercial light service	4,973.81	89,951.79	4,147.92	1,538.04	1,612.90
Commercial power service	4,543.84	102,352.71	3,578.48	....	....
Municipal power	....	8,229.87	....	....	....
Street lighting	1,772.50	20,925.33	1,726.22	533.00	640.00
Merchandise	....	....	....	....	....
Miscellaneous	1,000.01	2,179.63	419.52	113.32	3.87
Total earnings	19,393.83	362,704.79	15,797.51	4,878.13	4,328.38
EXPENSES					
Power purchased	11,672.01	233,755.84	10,246.93	2,987.63	2,177.03
Substation operation	....	5,511.68	....	....	....
Substation maintenance	....	2,583.35	....	....	....
Distribution system, operation and maintenance	1,240.42	14,801.82	904.47	120.27	106.46
Line transformer maintenance	48.52	1,265.36	....	....	....
Meter maintenance	383.03	4,612.11	181.62	166.25	132.82
Consumers' premises expenses	67.44	2,506.83	....	....	....
Street lighting, operation and maintenance	183.65	5,644.26	224.43	63.41	41.23
Promotion of business	167.80	488.10	....	....	....
Billing and collecting	1,130.67	5,744.59	521.41	....	....
General office, salaries and expenses	361.58	11,426.57	625.51	389.97	374.16
Undistributed expenses	79.28	8,122.48	116.40	....	....
Truck operation and maintenance	340.05	2,338.43	....	....	....
Interest	967.82	2,896.45	1,360.45	39.52	....
Sinking fund and principal payments on debentures	902.61	2,592.50	1,204.91	658.81	....
Depreciation	1,247.00	30,534.00	1,387.00	347.00	353.00
Other reserves	....	2,500.00	....	....	....
Total operating costs and fixed charges	18,791.88	337,324.37	16,773.13	4,772.86	3,184.70
Net surplus	601.95	25,380.42	....	105.27	1,143.68
Net loss	....	....	975.62	....	....
NUMBER OF CONSUMERS					
Domestic service	342	6,362	327	158	93
Commercial light service	85	943	71	40	36
Power service	6	155	6	....	....
Total	433	7,460	404	198	129

"B"—Continued

Hydro Municipalities for Year Ended December 31, 1939

Lindsay	Madoc	Marmora	Martintown	Maxville	Millbrook	Morrisburg	Napanee
7,138	1,108	995	P.V.	758	737	1,853	3,148
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
41,893.05	4,873.58	3,697.68	684.89	3,562.39	3,720.54	8,542.20	23,406.30
26,958.45	3,850.94	1,973.69	954.20	2,689.51	1,850.08	5,654.00	15,038.02
28,577.42	1,131.44	322.06	....	....	464.63	1,870.00	9,345.06
2,736.34	....	....	....	....	....	531.79	612.99
6,446.45	1,347.00	1,298.00	172.33	1,199.25	867.60	2,736.00	4,231.00
....	....	....	....	....	....	....	33.20
4,839.10	108.37	27.66	51.12	65.76	36.45	142.23	137.59
111,450.81	11,311.33	7,319.09	1,862.54	7,516.91	6,939.30	19,476.22	52,804.16
80,741.74	8,327.49	4,441.04	1,274.19	4,197.49	3,174.20	6,384.61	34,950.67
....	....	....	....	....	....	1,127.95	....
....	....	....	....	....	....	....	....
1,645.14	1,244.55	699.61	100.73	278.54	495.81	2,040.40	3,529.02
687.57	....	....	....	....	5.37	....	113.78
2,527.10	218.36	....	90.32	132.73	138.29	135.80	534.71
1,315.74	54.37	....	....	64.24	....	....	549.64
2,011.15	215.60	148.28	29.40	213.10	16.05	236.29	440.72
375.51	....	....	....	....	....	....	528.31
3,145.39	....	....	....	....	445.36	....	1,720.11
6,405.21	960.05	765.55	144.42	321.90	1,142.43	939.21	4,476.67
1,239.60	41.07	....	....	....	35.83	154.71	2,296.80
....	....	....	....	....	....	150.13	....
3,867.33	....	218.68	....	....	461.77	1,939.09	89.69
6,404.05	....	1,051.82	....	....	279.45	4,404.12	262.55
4,909.00	494.00	616.00	173.00	603.00	173.00	659.00	1,956.00
....	....	....	....	200.00	....	....	....
115,274.53	11,555.49	7,940.98	1,812.06	6,011.00	6,367.56	18,171.31	51,448.67
....	....	....	50.48	1,505.91	571.74	1,304.91	1,355.49
3,823.72	244.16	621.89	....	....	....	....	....
1,986	287	228	46	152	178	428	805
336	97	47	25	48	53	118	203
74	6	2	....	....	3	14	28
2,396	390	277	71	200	234	560	1,036

STATEMENT

Detailed Operating Reports of Electrical Departments of

EASTERN ONTARIO SYSTEM—Continued

Municipality	Newcastle	Norwood	Omemee	Orono	Oshawa
Population	700	710	553	*P.V.	24,756
EARNINGS	$ c.	$ c.	$ c.	$ c.	$ c.
Domestic service	5,567.77	4,453.57	2,510.99	4,731.72	178,077.15
Commercial light service	2,849.31	2,346.21	1,735.66	2,495.69	69,268.55
Commercial power service	1,737.21	528.28	2,311.16	59.05	228,637.92
Municipal power	....	....	....	....	8,297.37
Street lighting	650.84	1,612.90	1,030.08	826.09	12,070.66
Merchandise	....	....	....	....	....
Miscellaneous	81.24	611.02	82.59	16.30	9,451.08
Total earnings	10,886.37	9,551.98	7,670.48	8,128.85	505,802.73
EXPENSES					
Power purchased	4,532.80	4,017.61	4,802.89	3,628.80	431,238.75
Substation operation	....	....	....	....	....
Substation maintenance	....	....	....	....	109.22
Distribution system, operation and maintenance	500.30	552.92	403.63	176.56	6,072.06
Line transformer maintenance	7.65	....	5.40	45.84	380.01
Meter maintenance	102.09	....	56.00	123.91	3,634.91
Consumers' premises expenses	30.60	228.76	....	273.47	6,545.18
Street lighting, operation and maintenance	34.34	140.14	143.98	51.01	2,195.81
Promotion of business	....	....	....	....	549.21
Billing and collecting	876.26	....	....	688.80	10,123.78
General office, salaries and expenses	25.00	657.56	296.18	442.72	8,680.16
Undistributed expenses	16.06	....	12.80	11.00	4,875.91
Truck operation and maintenance	....	236.49	....	....	....
Interest	463.50	1,297.78	16.41	380.00	6,966.50
Sinking fund and principal payments on debentures	476.99	1,455.68	245.43	643.50	14,615.59
Depreciation	772.00	1,211.00	745.00	157.00	12,791.00
Other reserves	....	....	....	....	359.65
Total operating costs and fixed charges	7,837.59	9,797.94	6,727.72	6,622.61	509,137.74
Net surplus	3,048.78	....	942.76	1,506.24	....
Net loss	....	245.96	....	....	3,335.01
NUMBER OF CONSUMERS					
Domestic service	201	235	165	188	6,334
Commercial light service	36	57	41	46	562
Power service	5	3	6	1	107
Total	242	295	212	235	7,003

*13 months' operation.

"B"—Continued

Hydro Municipalities for Year Ended December 31, 1939

Ottawa 144,202	Perth 4,174	Peterborough 23,984	Picton 3,439	Port Hope 4,724	Prescott 2,925	Richmond 403
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
532,085.02	24,520.16	155,334.42	21,315.14	25,488.75	17,332.32	2,050.39
202,576.09	15,108.64	85,351.84	16,028.97	12,635.83	10,241.08	1,470.01
51,956.73	13,659.56	120,907.12	3,645.58	26,826.78	3,918.10	....
20,522.21	1,665.78	7,011.85	1,594.40	1,332.60	1,202.61	....
78,778.41	2,841.50	22,268.00	3,672.19	4,004.76	3,644.70	390.00
....	1,633.36	....	622.53	....	....	....
5,286.23	2,942.70	2,172.74	1,665.80	1,042.53	161.63	2.35
891,204.69	62,371.70	393,045.97	48,544.61	71,331.25	36,500.44	3,912.75
424,800.14	39,624.03	254,241.47	38,457.23	59,408.99	26,401.98	2,689.40
28,605.37	380.92	6,293.31	....	....	1,292.50	....
788.81	....	1,220.50	....	....	....	....
21,377.08	1,839.49	5,004.25	2,072.73	1,621.74	3,311.66	135.82
2,715.73	199.35	215.16	284.51	77.57	109.20	....
11,463.11	583.47	7,032.25	611.21	1,520.83	178.52	....
3,899.96	103.92	9,330.46	143.93	954.98	465.65	....
32,331.67	454.67	5,187.87	488.77	934.81	890.48	32.76
10,140.54	257.70	1,848.04	127.49	....	....	....
43,111.47	2,013.04	5,756.22	1,454.78	2,085.78	1,330.00	....
28,456.72	3,438.51	7,577.16	2,147.83	3,473.50	2,309.62	181.42
14,790.38	650.25	4,575.92	563.50	908.38	1,148.54	....
2,056.33	641.52	1,301.99	489.70	213.41	....	....
26,369.89	3,237.57	27,748.30	44.66	....	....	250.26
16,795.73	2,023.21	14,263.54	....	....	....	316.43
93,645.81	4,189.00	19,857.00	2,302.00	2,728.00	3,265.00	256.00
55,000.00	566.00	500.00	....	....	....	....
816,348.74	60,202.65	371,953.44	49,188.34	73,927.99	40,703.15	3,862.09
74,855.95	2,169.05	21,092.53	....	....	....	50.66
....	....	....	643.73	2,596.74	4,202.71	....
13,933	1,025	5,739	1,008	1,338	725	66
1,381	198	931	196	205	170	28
189	26	160	29	37	21	....
15,503	1,249	6,830	1,233	1,580	916	94

STATEMENT

Detailed Operating Reports of Electrical Departments of

EASTERN ONTARIO SYSTEM—Concluded

Municipality	Russell	Smiths Falls	Stirling	Trenton	Tweed
Population	P.V.	7,672	960	6,833	1,228
EARNINGS	$ c.	$ c.	$ c.	$ c.	$ c.
Domestic service	2,775.18	44,962.72	5,036.86	31,247.69	5,991.46
Commercial light service	1,614.08	16,839.47	3,642.82	19,932.05	4,821.78
Commercial power service	....	20,592.91	1,329.69	57,053.62	2,931.31
Municipal power	....	874.54	287.73	1,847.11	372.35
Street lighting	784.00	7,489.92	1,607.04	6,964.13	2,023.71
Merchandise	....	....	156.63	....	895.29
Miscellaneous	95.00	3,053.38	352.23	1,574.36	109.58
Total earnings	5,268.26	93,812.94	12,413.00	118,618.96	17,145.48
EXPENSES					
Power purchased	2,662.01	56,520.48	7,398.94	86,590.63	9,748.65
Substation operation	....	464.81	264.24	85.71	....
Substation maintenance	....	797.33	....	....	....
Distribution system, operation and maintenance	226.87	4,841.78	867.90	2,585.23	664.23
Line transformer maintenance	....	758.83	35.75	104.76	3.05
Meter maintenance	24.50	1,364.13	176.05	2,234.15	208.07
Consumers' premises expenses	40.63	2,595.50	....	659.51	....
Street lighting, operation and maintenance	96.38	998.45	275.49	1,151.05	208.70
Promotion of business	....	747.47	....	140.39	....
Billing and collecting	....	3,649.48	525.46	3,350.63	710.01
General office, salaries and expenses	412.57	3,129.31	1,266.05	5,654.01	1,094.03
Undistributed expenses	....	945.96	80.88	2,471.65	183.19
Truck operation and maintenance	....	1,136.05	177.13	961.86	28.93
Interest	261.55	444.06	....	2,572.70	410.48
Sinking fund and principal payments on debentures	575.24	2,717.10	....	7,089.74	....
Depreciation	346.00	7,139.00	941.00	5,331.00	586.00
Other reserves	....	....	....	....	227.00
Total operating costs and fixed charges	4,645.75	88,249.74	12,008.89	120,983.02	14,072.34
Net surplus	622.51	5,563.20	404.11	....	3,073.14
Net loss	....	....	....	2,364.06	....
NUMBER OF CONSUMERS					
Domestic service	119	1,815	289	1,496	291
Commercial light service	35	279	79	264	98
Power service	....	44	13	51	15
Total	154	2,138	381	1,811	404

"B"—Continued

Hydro Municipalities for Year Ended December 31, 1939

Warkworth P.V.	Wellington 916	Westport 693	Whitby 3,724	Williamsburg P.V.	Winchester 1,040	EASTERN ONTARIO SYSTEM SUMMARY
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
2,177.11	6,016.63	3,490.34	24,311.57	1,989.98	6,208.00	1,641,411.79
1,264.75	2,410.29	3,193.76	13,106.03	3,880.91	3,921.09	817,034.53
....	1,301.28	....	12,992.71	127.44	1,435.73	898,496.98
....	....	....	1,225.28	....	....	74,307.90
615.00	1,087.32	1,322.27	4,087.06	240.00	944.00	255,392.34
....	....	....	....	....	35.17	8,748.67
137.50	200.00	160.98	3,824.88	463.85	363.17	61,332.36
4,194.36	11,015.52	8,167.35	59,547.53	6,702.18	12,907.16	3,756,724.57
2,743.02	6,731.35	4,514.89	36,624.20	4,365.46	9,139.73	2,438,519.51
....	....	....	....	....	....	50,772.16
....	....	....	220.89	....	....	6,406.29
96.94	731.01	410.34	3,717.65	187.91	366.23	109,061.67
....	....	....	44.07	....	....	9,192.62
9.49	206.38	7.60	201.36	103.10	151.60	46,935.28
....	28.43	....	773.16	18.90	61.85	33,383.18
48.25	142.39	145.94	562.95	202.01	93.21	63,734.09
....	....	....	246.61	....	....	18,079.37
....	....	....	1,616.06	....	599.73	108,932.42
225.14	609.33	994.09	2,184.31	711.75	245.46	133,853.14
....	38.32	....	296.14	....	....	50,098.80
....	....	60.85	....	....	....	12,622.36
484.56	472.55	603.32	1,004.78	....	228.31	98,372.78
314.58	933.88	625.79	3,028.54	....	545.39	109,910.04
267.00	887.00	264.00	3,882.00	279.00	739.00	244,696.81
....	....	....	....	100.00	....	59,702.65
4,188.98	10,780.64	7,626.82	54,402.72	5,968.13	12,170.51	3,594,273.17
5.38	234.88	540.53	5,144.81	734.05	736.65	162,451.40
....	....	....	....	....	....	....
137	321	113	908	101	289	61,987
44	66	51	166	53	83	9,756
....	5	....	23	1	3	1,381
181	392	164	1,097	155	375	73,124

STATEMENT

Detailed Operating Reports of Electrical Departments of

THUNDER BAY SYSTEM

Municipality Population	Fort William 24,301	Nipigon Twp.	Port Arthur 20,872	THUNDER BAY SYSTEM SUMMARY
EARNINGS	$ c.	$ c.	$ c.	$ c.
Domestic service	197,320.43	3,462.47	115,345.20	316,128.10
Commercial light service	70,166.68	3,261.85	67,007.50	140,436.03
Commercial power service	43,551.48	181.57	621,703.24	665,436.29
Municipal power	25,130.87	503.26	34,305.31	59,939.44
Street lighting	19,541.13	593.00	19,590.56	39,724.69
Merchandise	....	....	....	....
Miscellaneous	2,337.04	196.25	15,043.99	17,577.28
Total earnings	358,047.63	8,198.40	872,995.80	1,239,241.83
EXPENSES				
Power purchased	254,401.76	3,958.86	749,477.84	1,007,838.46
Substation operation	7,650.74	....	25,212.33	32,863.07
Substation maintenance	950.36	....	6,250.54	7,200.90
Distribution system, operation and maintenance	7,841.01	542.30	17,665.12	26,048.43
Line transformer maintenance	133.77	71.14	977.61	1,182.52
Meter maintenance	8,346.36	39.10	7,706.14	16,091.60
Consumers' premises expenses	1,069.52	....	....	1,069.52
Street lighting, operation and maintenance	7,132.22	37.63	5,078.95	12,248.80
Promotion of business	775.92	30.00	2,799.74	3,605.66
Billing and collecting	14,943.89	....	12,770.54	27,714.43
General office, salaries and expenses	5,344.83	947.05	13,734.42	20,026.30
Undistributed expenses	3,910.27	56.70	7,966.13	11,933.10
Truck operation and maintenance	1,529.61	....	1,410.49	2,940.10
Interest	15,416.30	261.19	2,121.15	17,798.64
Sinking fund and principal payments on debentures	7,943.17	614.62	1,892.47	10,450.26
Depreciation	16,502.00	649.00	29,023.94	46,174.94
Other reserves	1,907.10	....	3,500.00	5,407.10
Total operating costs and fixed charges	355,798.83	7,207.59	887,587.41	1,250,593.83
Net surplus	2,248.80	990.81	....	....
Net loss	....	....	14,591.61	11,352.00
NUMBER OF CONSUMERS				
Domestic service	5,841	195	4,972	11,008
Commercial light service	930	57	821	1,808
Power service	117	2	109	228
Total	6,888	254	5,902	13,044

"B"—Concluded

Hydro Municipalities for Year Ended December 31, 1939

NORTHERN ONTARIO DISTRICTS

Capreol 1,680	Sioux Lookout *1,901	Sudbury 26.463	NORTHERN ONTARIO DISTRICTS SUMMARY	ALL SYSTEMS GRAND SUMMARY
$ c.	$ c.	$ c.	$ c.	$ c.
9,684.77	3,716.76	209,478.98	222,880.51	13,038,748.37
3,987.81	3,481.21	161,430.19	168,899.21	7,077,144.74
....	....	39,994.84	39,994.84	10,957,719.66
740.27	....	11,880.48	12,620.75	1,760,977.25
1,257.67	420.68	21,907.37	23,585.72	1,831,090.33
....	....	....	....	28,874.86
165.58	....	4,066.54	4,232.12	595,235.49
15,836.10	7,618.65	448,758.40	472,213.15	35,289,790.70
5,808.92	8,750.01	241,962.61	256,521.54	21,855,595.20
....	....	8,154.75	8,154.75	516,987.25
....	....	....	....	377,013.25
1,750.10	257.05	16,568.29	18,575.44	943,859 59
34.03	72.90	1,701.67	1,808.60	95,577.72
134.55	27.85	4,696.83	4,859.23	386,145.71
....	....	727.13	727.13	488,980.55
551.75	50.70	10,638.92	11,241.37	384,071.55
....	....	....	....	317,467.64
1,093.36	527.66	17,808.08	19,429.10	1,008,065.66
1,051.37	111.66	12,900.64	14,063.67	966,550.98
100.80	....	3,929.09	4,029.89	463,456.65
....	100.40	3,233.15	3,333.55	80,263.46
166.94	....	7,168.04	7,334.98	1,594,040.32
931.13	....	9,151.18	10,082.31	2,420,441 30
743.00	95.60	14,901.00	15,739.60	2,422,174.57
68.36	....	15,000.00	15,068.36	102,189.76
12,434.31	9,993.83	368,541.38	390,969.52	34,422,881.16
3,401.79	....	80,217.02	81,243.63	866,909 54
....	2,375.18	....	....	....
307	524	6,731	7,562	509,284
49	115	1,059	1,223	77,071
1	....	140	141	13,072
357	639	7,930	8,926	599,427

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*Four months' operation.

STATEMENT "C"

Street Lighting Installation in Hydro Municipalities, December 31, 1939; showing Rate per Lamp, Cost to Municipality in 1939, and Cost per Capita.

Municipality	Population	Number of lamps	Size and style of lamps	Interim rate per lamp per annum	Cost to municipality in 1939	Cost per capita
				$ c.	$ c.	$ c.
Acton..........	1,869	134	80 c.p. *s*	9.00	1,983.06	1.06
		5	80 c.p. *s*	12.00		
		2	400 c.p. *s*	18.00		
		8	60 watt *m*	4.00		
		62	100 watt *m*	9.00		
		1	150 watt *m*	12.00		
		1	200 watt *m*	18.50		
		4	300 watt *m*	20.00		
Agincourt......	....	63	100 watt *m*	12.00	756.00	**
Ailsa Craig.....	483	66	100 watt *m*	10.00	683.30	1.41
		2	200 watt *m*	18.00		
Alexandria......	1,971	138	100 watt *m*	14.00	1,944.33	0.99
		1	200 watt *m*	24.00		
Alliston........	1,405	101	150 c.p. *s*	17.50	1,977.50	1.41
		12	100 watt *m*	17.50		
Alvinston.......	650	84	100 watt *m*	17.00	1,584.00	2.44
		6	200 watt *m*	26.00		
Amherstburg....	2,857	72	100 watt *m*	15.00	2,311.18	††
		41	200 watt *m*	20.00		
		16	300 watt *m*	26.00		
Ancaster Twp...	....	32	100 watt *m*	11.50	1,054.00	**
		49	150 watt *m*	14.00		
Apple Hill......	....	33	100 watt *m*	14.50	477.30	**
Arkona.........	397	48	100 watt *m*	20.00	1,072.00	2.70
		4	150 watt *m*	28.00		
Arnprior........	4,059	177	100 watt *m*	18.00	3,084.38	0.76
		10	300 watt *m*	27.00		
Arthur.........	1,035	90	100 c.p. *s*	15.50	1,462.50	1.41
Athens.........	670	40	100 watt *m*	12.00	1,055.00	1.57
		23	200 watt *m*	25.00		
Aylmer.........	2,156	193	100 watt *m*	10.00	2,575.83	1.19
		1	100 watt (11 mos.) *m*	10.00		
		24	300 watt *m*	25.00		
		1	Traffic signal *m*	40.00		
Ayr............	730	92	100 watt *m*	10.00	1,028.00	1.41
		3	500 watt *m*	36.00		

NOTE: The "Cost to municipality in 1939" represents the charges billed to the municipality by the utility for street lighting service in the calendar year. This total charge differs in some cases from the total computed for the installation at the rates shown, for the following reasons:—FIRST: Certain equipment may have been in service for less than twelve months. SECOND: More equipment than shown for December 31 may have been in service earlier in the year.

**Population not shown in Government statistics. *s* Series system. *m* Multiple system.

††Certain additional street lighting costs for special service are paid direct in form of debenture charges.

STATEMENT "C"—Continued

Street Lighting Installation in Hydro Municipalities, December 31, 1939; showing Rate per Lamp, Cost to Municipality in 1939, and Cost per Capita.

Municipality	Population	Number of lamps	Size and style of lamps	Interim rate per lamp per annum	Cost to municipality in 1939	Cost per capita
				$ c.	$ c.	$ c.
Baden	....	79	100 watt *m*	9.00	711.00	**
Barrie	8,310	479	150 c.p. *s*	9.00	6,002.10	0.72
		14	100 watt *m*	17.00		
		48	200 watt *m*	22.00		
		13	200 watt *m*	15.00		
		3	(Dock) 200 watt *m* (6 mos.)	12.00		
		13	300 watt *m*	25.00		
		1	(Monument) 500 watt *m*	30.00		
Bath	343	21	100 watt *m*	25.00	525.00	1.53
Beachville	....	47	100 watt *m*	11.00	517.00	**
Beamsville	1,161	52	80 c.p. *s*	8.00	1,908.00	1.64
		5	60 watt *m*	8.00		
		40	100 watt *m*	12.00		
		54	200 watt *m*	18.00		
Beaverton	955	108	100 watt *m*	10.00	1,297.82	1.36
		11	100 watt (6 mos.) *m*	7.00		
		6	500 watt *m*	25.00		
Beeton	571	65	150 c.p. *s*	16.00	1,264.00	2.21
		14	100 watt *m*	16.00		
Belle River	814	81	100 watt *m*	12.00	1,030.00	1.27
			Decorative lights *m*	50c. per 100 watts per month		
Belleville	14,589	539	100 c.p. *s*	7.00	10,340.78	0.71
		19	250 c.p. *s*	15.00		
		52	1,000 c.p. *s*	30.00		
		22	100 watt *m*	9.50		
		16	200 watt *m*	12.50		
		3	200 watt *m*	15.00		
		24	250 watt *m*	14.50		
		217	300 watt *m*	20.00		
Blenheim	1,758	166	150 c.p. *s*	12.00	2,626.15	1.49
		3	400 c.p. *s*	28.00		
		12	600 c.p. *s*	37.00		
		1	Traffic light *m*	16.00		
		1	500 watt *m*	33.00		
Bloomfield	653	64	100 watt *m*	11.00	704.00	1.08
Blyth	656	90	100 watt *m*	13.00	1,580.00	2.41
		20	200 watt *m*	20.50		
Bolton	600	48	100 watt *m*	12.00	1,070.52	1.78
		23	200 watt *m*	21.50		
Bothwell	694	70	100 watt *m*	10.00	1,225.02	1.77
		21	300 watt *m*	25.00		

**Population not shown in Government statistics. *s* Series system. *m* Multiple system.

STATEMENT "C"—Continued

Street Lighting Installation in Hydro Municipalities, December 31, 1939; showing Rate per Lamp, Cost to Municipality in 1939, and Cost per Capita.

Municipality	Population	Number of lamps	Size and style of lamps	Interim rate per lamp per annum	Cost to municipality in 1939	Cost per capita
				$ c.	$ c.	$ c.
Bowmanville....	3,850	182	100 c.p. *s*	10.00	3,866.49	1.00
		19	300 watt *m*	30.00		
		28	500 watt *m*	53.00		
Bradford.......	988	60	150 c.p. *s*	16.00	1,072.00	1.09
		7	100 watt *m*	16.00		
Brampton......	5,695	586	100 watt *m*	8.00	6,458.66	1.13
		1	500 watt *m*	35.00		
		46	500 watt *m*	37.50		
		2	300 watt *m*	28.00		
Brantford......	31,369	149	1,500 c.p. *s*	45.00	33,593.94	††
		3,459	100 watt *m*	7.50		
		8	250 watt *m*	10.00		
		2	300 watt *m*	16.00		
		18	750 watt *m*	37.00		
		4	750 watt *m*	46.00		
Brantford Twp..	....	387	100 watt *m*	11.00	4,151.87	**
Brechin........	‡	34	100 watt *m*	14.00	476.50	**
Bridgeport......	....	60	100 watt *m*	13.00	799.50	**
		12	100 watt (bridge) *m*	8.00		
Brigden........	....	46	60 watt *m*	11.00	800.00	**
		21	100 watt *m*	14.00		
Brighton.......	1,454	137	100 c.p. *s*	15.00	2,055.00	1.41
Brockville......	9,995	650	100 c.p. *s*	10.00	8,871.50	0.89
		10	200 watt orn. *m*	19.00		
		35	3 lt. stands. *m*	21.00		
		51	5 lt. stands. *m*	24.00		
		13	300 watt *m*	20.00		
Brussels........	773	81	100 watt *m*	12.00	1,296.00	1.68
		18	200 watt *m*	18.00		
Burford........	....	67	100 watt *m*	10.00	670.08	**
Burgessville.....	....	24	100 watt *m*	13.00	312.00	**
Caledonia......	1,425	147	100 watt *m*	9.00	1,908.27	1.34
		20	100 watt (bridge) *m*	9.50		
		9	100 watt (twp.) *m*	13.00		
		2	200 watt *m*	14.00		
		10	300 watt *m*	22.50		
		1	500 watt *m*	32.00		
Campbellville...	....	20	100 watt *m*	23.00	460.00	**
Cannington.....	756	65	100 watt *m*	15.00	1,144.69	1.51
		1	200 watt *m*	18.50		
		3	300 watt *m*	22.00		
		3	500 watt *m*	32.00		

‡Includes Mara and Thorah townships.

**Population not shown in Government statistics. *s* Series system. *m* Multiple system.

††Certain additional street lighting costs for special service are paid direct in form of debenture charges.

STATEMENT "C"—Continued

Street Lighting Installation in Hydro Municipalities, December 31, 1939; showing Rate per Lamp, Cost to Municipality in 1939, and Cost per Capita.

Municipality	Population	Number of lamps	Size and style of lamps		Interim rate per lamp per annum	Cost to municipality in 1939	Cost per capita
					$ c.	$ c.	$ c.
Capreol........	1,680	90	100 watt	*m*	14.00	1,257.67	0.75
Cardinal........	1,556	52	100 watt	*m*	15.00	977.00	0.63
		12	200 watt	*m*	21.00		
Carleton Place..	4,278	85	60 watt	*m*	13.00	4,834.89	1.13
		102	200 watt	*m*	20.00		
		68	300 watt	*m*	25.00		
Cayuga........	682	91	100 watt	*m*	17.00	1,437.93	2.11
		1	150 watt	*m*	20.00		
Chatham.......	16,517	723	150 c.p.	*s*	13.00	19,356.31	††
		19	250 c.p.	*s*	16.00		
		47	600 c.p.	*s*	31.00		
		37	150 c.p. orn.	*s*	12.00		
		75	600 c.p. orn.	*s*	30.00		
		139	1,000 c.p. orn.	*s*	38.00		
Chatsworth.....	337	41	100 watt	*m*	13.00	533.00	1.58
Chesley........	1,815	125	150 c.p.	*s*	11.00	1,377.10	0.76
Chesterville.....	1,083	87	100 watt	*m*	12.00	1,040.00	0.96
Chippawa......	1,140	95	100 watt	*m*	13.00	1,689.33	1.48
		19	200 watt	*m*	25.00		
Clifford........	452	58	100 watt	*m*	13.00	951.94	2.11
		10	200 watt	*m*	20.00		
Clinton.........	1,888	148	150 c.p.	*s*	11.00	2,705.80	1.43
		8	100 watt	*m*	11.00		
		29	300 watt	*m*	31.00		
		1	500 watt	*m*	55.00		
Cobden........	627	38	100 watt	*m*	13.50	765.00	1.22
		12	150 watt	*m*	21.00		
Cobourg........	5,307	175	100 c.p.	*s*	12.00	5,850.88	1.13
		231	100 watt	*m*	12.00		
		5	250 watt	*m*	23.00		
		19	500 watt	*m*	47.50		
Colborne.......	955	120	60 c.p.	*s*	12.00	1,508.00	1.58
		6	100 watt	*m*	12.00		
Coldwater......	612	50	100 watt	*m*	11.00	873.00	1.43
		19	200 watt	*m*	17.00		
Collingwood....	5,322	424	150 c.p.	*s*	9.00	3,808.03	0.72
Comber........	....	49	100 watt	*m*	12.00	689.50	**
		7	200 watt	*m*	18.00		
Cookstown.....	....	57	150 c.p.	*s*	15.00	855.00	**

**Population not shown in Government statistics. *s* Series system. *m* Multiple system.

††Certain additional street lighting costs for special service are paid direct in form of debenture charges.

STATEMENT "C"—Continued

Street Lighting Installation in Hydro Municipalities, December 31, 1939; showing Rate per Lamp, Cost to Municipality in 1939, and Cost per Capita.

Municipality	Population	Number of lamps	Size and style of lamps	Interim rate per lamp per annum	Cost to municipality in 1939	Cost per capita
				$ c.	$ c.	$ c.
Cottam	....	32	100 watt *m*	15.00	480.00	**
Courtright	329	43	100 watt *m*	16.00	688.00	2.09
Creemore	615	62	100 watt *m*	12.00	744.00	1.21
Dashwood	....	41	100 watt *m*	11.00	451.01	**
Delaware	....	22	100 watt *m*	12.00	270.00	**
		1	100 watt (6 mos.) *m*	12.00		
Delhi	2,083	175	100 watt *m*	12.00	2,140.90	1.03
		1	200 watt *m*	17.50		
		1	200 watt *m*	25.00		
		1	Traffic light *m*	17.50		
Deseronto	1,300	137	100 c.p. *s*	10.00	1,369.80	1.05
Dorchester	....	72	100 watt *m*	10.00	720.00	**
Drayton	527	80	100 watt *m*	12.00	960.00	1.82
Dresden	1,572	109	100 c.p. *s*	13.00	2,061.48	1.31
		20	400 c.p. *s*	21.50		
		12	100 watt (bridge) *m*	12.00		
		15	50 watt (arch) *m*	4.56		
Drumbo	....	41	100 watt *m*	13.00	528.66	**
Dublin	....	50	100 watt *m*	11.00	550.00	**
Dundalk	700	82	100 watt *m*	15.00	1,230.00	1.76
Dundas	4,839	286	100 watt *m*	12.00	5,628.00	††
		12	200 watt *m*	16.00		
		54	200 watt *m*	32.00		
		6	200 watt orn. *m*	26.00		
		20	100 watt *m*			
			Memorial square	Free		
		5	300 watt *m*	24.00		
Dunnville	3,928	162	150 c.p. *s*	10.50	3,577.92	0.91
		27	1,000 c.p. *s*	31.50		
		105	100 watt *m*	10.50		
Durham	1,864	106	150 c.p. *s*	14.00	1,616.00	0.87
		6	400 c.p. *s*	22.00		
Dutton	793	115	100 watt *m*	9.00	1,036.44	1.31
East York Twp.	....	1	60 watt *m*	7.80	21,128.99	**
		1,097	100 watt *m*	13.00		
		4	200 watt *m*	19.50		
		2	250 watt *m*	22.75		
		246	300 watt *m*	26.00		
		15	500 watt *m*	29.00		

**Population not shown in Government statistics. *s* Series system. *m* Multiple system.

††Certain additional street lighting costs for special service are paid direct in form of debenture charges.

STATEMENT "C"—Continued

Street Lighting Installation in Hydro Municipalities, December 31, 1939; showing Rate per Lamp, Cost to Municipality in 1939, and Cost per Capita.

Municipality	Population	Number of lamps	Size and style of lamps	Interim rate per lamp per annum	Cost to municipality in 1939	Cost per capita
				$ c.	$ c.	$ c.
Elmira.........	2,074	191	100 watt *m*	9.00	2,035.00	0.98
		8	200 watt *m*	12.00		
		1	500 watt *m*	28.00		
		2	200 watt *m*	23.00		
		4	400 watt *m*	36.50		
Elmvale........	....	60	100 watt *m*	12.00	790.50	**
Elmwood.......	....	23	150 watt *m*	18.00	442.58	**
Elora..........	1,149	81	100 watt *m*	13.00	1,544.64	1.34
		27	200 watt *m*	19.00		
Embro.........	423	53	100 watt *m*	12.00	636.00	1.50
Erieau.........	295	24	100 watt *m*	18.00	432.00	1.46
Essex..........	1,854	134	60 watt *m*	7.50	2,156.68	††
		16	100 watt *m*	10.00		
		5	200 watt *m*	14.00		
		49	300 watt orn. *m*	18.00		
		1	500 watt orn. *m*	28.00		
		12	Empty sockets orn. *m*	1.50		
		6	Empty sockets *m*	4.50		
Etobicoke Twp..	....	1,049	100 watt *m*	12.50	13,767.62	**
		22	100 watt *m*	17.00		
		2	250 watt *m*	16.00		
		2	25 watt *m*	12.50 per 100 watts		
		8	200 watt *m*	14.50		
		9	300 watt *m*	29.00		
Exeter.........	1,649	3	100 watt (Park) *m*	8.50	2,736.87	1.66
		175	100 watt *m*	9.50		
		32	300 watt *m*	33.00		
Fergus.........	2,792	145	100 watt *m*	12.00	2,758.86	0.99
		20	150 watt *m*	14.50		
		22	300 watt orn. *m*	27.50		
		4	Traffic lights *m*	18.00		
Finch..........	337	39	100 watt *m*	12.00	468.00	1.39
Flesherton......	455	56	100 watt *m*	11.00	626.60	1.38
		1	300 watt *m*	26.00		
Fonthill........	867	71	100 watt *m*	15.00	1,364.83	1.57
		12	300 watt *m*	27.00		
Forest..........	1.520	109	60 watt *m*	7.00	2,426.34	1.60
		149	100 watt *m*	11.00		
		3	100 watt *m* (Station platform)	18.00		
Forest Hill......	11,117	535	100 watt *m*	12.00	7.176.06	0.65
		3	300 watt *m*	27.00		
		20	300 watt *m*	38.00		
		5	400 watt *m*	61.00		

**Population not shown in Government statistics. *s* Series system. *m* Multiple system.

††Certain additional street lighting costs for special service are paid direct in form of debenture charges.

STATEMENT "C"—Continued

Street Lighting Installation in Hydro Municipalities, December 31, 1939; showing Rate per Lamp, Cost to Municipality in 1939, and Cost per Capita.

Municipality	Population	Number of lamps	Size and style of lamps	Interim rate per lamp per annum	Cost to municipality in 1939	Cost per capita
				$ c.	$ c.	$ c.
Fort William....	24,301	381	100 c.p. *s*	8.00	19,541.13	0.80
		58	400 c.p. *s*	18.00		
		77	600 c.p. *s*	28.00		
		239	1,000 c.p. *s*	38.00		
		188	100 watt *m*	8.00		
		115	300 watt *m*	23.00		
		25	25 watt *m*	2.70		
Galt...........	14,219	981	100 c.p. *s*	9.00	16,292.92	1.15
		294	100 watt *m*	6.50		
		100	100 watt *m*	8.00		
		26	150 watt *m*	9.00		
		22	100 watt *m*	16.00		
		18	150 watt (bridge) *m*	8.50		
		33	150 watt *m*	9.00		
		40	150 watt *m*	18.00		
		31	150 watt *m*	21.00		
		4	300 watt *m*	16.50		
		80	300 watt *m*	17.00		
		12	300 watt *m*	26.00		
Georgetown‡....	2,345	163	100 watt *m*	11.00	2,736.29	......
		1	300 watt *m*	19.00		
			(floodlight)			
		5	300 watt *m*	30.00		
		16	500 watt *m*	38.50		
Glencoe........	726	113	100 watt *m*	14.00	1,962.00	2.70
		19	200 watt *m*	20.00		
Goderich.......	4,407	327	100 c.p. *s*	9.00	4,488.13	1.02
		8	100 watt *m*	15.00		
		7	400 watt *m*	35.00		
		4	250 watt *m*	18.00		
		8	500 watt *m*	37.00		
		16	600 watt *m*	52.00		
Grand valley....	600	42	100 watt *m*	12.00	920.00	1.53
		13	300 watt *m*	32.00		
Granton........	....	37	100 watt *m*	10.00	370.00	**
Gravenhurst....	2,135	134	100 c.p. *s*	10.00	2,092.98	0.98
		22	50 watt *m*	7.50		
		10	50 watt (6 mos.) *m*	4.00		
		2	100 watt *m*	10.00		
		8	100 watt (6 mos.) *m*	6.00		
		16	300 watt *m*	30.00		
Guelph.........	21,514	10	50 watt *m*	4.00	18,961.48	0.88
		6	50 watt *m*	4.00		
		1,394	100 watt *m*	10.00		
		180	200 watt *m*	12.50		
		43	300 watt *m*	18.75		
		12	500 watt (220V) *m*	25.00		
		53	500 watt (220V) *m*	34.00		
Hagersville.....	1,355	115	100 watt *m*	14.00	2,050.00	1.51
		20	300 watt *m*	22.00		

**Population not shown in Government statistics. *s* Series system. *m* Multiple system.
‡Includes Glen Williams.

STATEMENT "C"—Continued

Street Lighting Installation in Hydro Municipalities, December 31, 1939; showing Rate per Lamp, Cost to Municipality in 1939, and Cost per Capita.

Municipality	Population	Number of lamps	Size and style of lamps	Interim rate per lamp per annum	Cost to municipality in 1939	Cost per capita
				$ c.	$ c.	$ c.
Hamilton.......	154,751	6	40 watt *m*	4.50	123,751.44	0.80
		96	50 watt *m*	6.00		
		6	50 watt *m*	7.00		
		12	60 watt *m*	8.00		
		8,150	100 watt *m*	7.50		
		42	100 watt *m*	7.00		
		68	100 watt *m*	9.50		
		19	100 watt *m*	10.00		
		6	100 watt *m*	11.00		
		1,352	200 watt *m*	11.00		
		13	200 watt *m*	13.00		
		2	300 watt *m*	18.00		
		6	300 watt *m*	26.00		
		77	300 watt *m*	32.00		
		27	300 watt *m*	34.00		
		490	500 watt *m*	32.00		
		600	500 watt *m*	37.00		
		65	750 watt *m*	55.00		
		2	1,000 watt *m*	70.00		
		2	1,200 watt stands *m*	70.00		
		10	500 watt stands *m*	40.00		
			880 watt special *m*	94.00		
			840 watt special *m*	72.00		
		3	Danger signals *m*	28.00		
Hanover........	3,215	94	150 c.p. *s*	19.00	2,628.96	0.82
		16	250 c.p. *s*	24.00		
		4	100 watt *m*	19.00		
		13	200 watt *m*	24.00		
Harriston.......	1,269	79	150 c.p. *s*	12.00	1,606.50	1.27
		4	100 watt *m*	12.00		
		13	150 watt *m*	13.50		
		29	200 watt *m*	15.00		
Harrow........	1,032	1	100 watt *m*	12.00	1,348.50	1.31
		84	200 watt *m*	16.50		
Hastings.......	757	65	100 watt *m*	16.00	1,293.73	1.71
		8	200 watt *m*	20.00		
			Decorative lights *m*	108.50		
Havelock.......	1,147	64	100 c.p. *s*	13.00	1,512.00	1.32
		23	250 c.p. *s*	24.00		
Hensall.........	685	84	100 watt *m*	12.00	1,008.00	1.47
Hespeler........	2,789	91	150 c.p. *s*	12.00	3,173.11	1.14
		22	250 c.p. *s*	16.00		
		15	400 c.p. stands. *s*	30.00		
		51	150 watt *m*	11.00		
		10	300 watt *m*	21.50		
		7	300 watt stands—Park *m*	35.00		
		11	250 watt *m*	19.50		
		6	250 watt stands. *m*	26.00		
Highgate.......	362	40	100 watt *m*	11.00	567.00	1.57
		6	200 watt *m*	17.00		
		1	300 watt *m*	25.00		

**Population not shown in Government statistics. *s* Series system. *m* Multiple system.

STATEMENT "C"—Continued

Street Lighting Installation in Hydro Municipalities, December 31, 1939; showing Rate per Lamp, Cost to Municipality in 1939, and Cost per Capita.

Municipality	Population	Number of lamps	Size and style of lamps	Interim rate per lamp per annum	Cost to municipality in 1939	Cost per capita
				$ c.	$ c.	$ c.
Holstein	....	15	100 watt *m*	25.00	375.00	**
Humberstone	2,738	109	100 watt *m*	12.50	1,642.50	0.60
		16	200 watt *m*	17.50		
Huntsville	2,770	4	100 c.p. *s*	12.00	2,780.00	1.00
		52	150 c.p. *s*	16.00		
		10	250 c.p. *s*	20.00		
		68	75 watt *m*	10.00		
		34	500 watt *m*	30.00		
Ingersoll	5,177	336	100 c.p. *s*	10.00	4,832.39	††
		2	600 c.p. *s*	28.00		
		26	1,000 c.p. *s*	35.00		
		2	1,000 c.p. (church) *s*	25.00		
		13	100 c.p. (6 mos.) *s*	5.50		
		12	300 watt *m*	30.00		
Jarvis	519	78	100 watt *m*	11.00	858.00	1.65
Kemptville	1,218	78	100 watt *m*	18.00	1,772.50	1.46
		17	150 watt *m*	21.00		
		1	250 watt *m*	25.00		
Kincardine	2,464	165	100 c.p. *s*	18.00	4,297.00	1.74
		30	100 watt *m*	13.00		
		39	200 watt *m*	23.00		
		1	1,000 watt *m*	80.00		
Kingston	23,355	105	100 c.p. *s*	12.00	20,925.33	0.90
		1	250 c.p. *s*	25.00		
		266	600 c.p. *s*	35.00		
		258	600 c.p. *s*	46.00		
Kingsville	2,359	112	150 c.p. *s*	10.50	2,872.24	††
		25	250 c.p. *s*	15.00		
		126	100 watt *m*	10.50		
Kirkfield	....	24	100 watt *m*	20.00	480.00	**
Kitchener	33,080	2,082	80 c.p. *s*	8.00	31,609.70	††
		163	250 c.p. *s*	13.00		
		18	1,000 c.p. *s*	25.00		
		47	16 c.p. Fire alarm *s*	7.00		
		212	100 watt *m*	9.00		
		462	200 watt *m*	14.00		
		58	300 watt *m*	17.50		
		109	500 watt *m*	25.00		
Lakefield	1,308	114	100 watt *m*	15.00	1,726.22	1.32
Lambeth	....	11	100 watt *m*	11.00	741.00	**
		20	300 watt *m*	31.00		
Lanark	723	41	100 watt *m*	13.00	533.00	0.74
Lancaster	511	41	100 watt *m*	15.00	640.00	1.25
		1	200 watt *m*	25.00		

**Population not shown in Government statistics. *s* Series system. *m* Multiple system.

††Certain additional street lighting costs for special service are paid direct in form of debenture charges.

STATEMENT "C"—Continued

Street Lighting Installation in Hydro Municipalities, December 31, 1939; showing Rate per Lamp, Cost to Municipality in 1939, and Cost per Capita.

Municipality	Population	Number of lamps	Size and style of lamps	Interim rate per lamp per annum	Cost to municipality in 1939	Cost per capita
				$ c.	$ c.	$ c.
La Salle	882	67	100 watt *m*	12.00	804.00	0.91
Leamington	5,630	175	250 c.p. *s*	15.00	5,300.96	††
		4	600 c.p. *s*	25.00		
		190	100 watt *m*	13.00		
		5	200 watt *m*	17.00		
Lindsay	7,138	420	100 c.p. *s*	11.00	6,446.45	0.90
		25	1,000 c.p. *s*	60.00		
		2	1,000 c.p. (cenotaph) *s*	60.00		
Listowel	2,773	310	100 watt *m*	11.00	4,659.96	††
		10	200 watt *m*	25.00		
		31	500 watt *m*	35.00		
London	73,846	8	150 c.p. *s*	10.00	55,975.40	††
		1,542	150 c.p. *s*	11.00		
		125	400 c.p. *s*	18.00		
		234	400 c.p. *s*	24.00		
		33	500 c.p. *s*	28.00		
		175	600 c.p. *s*	30.00		
		2	50 watt *m*	5.00		
		528	100 watt *m*	10.00		
		7	100 watt *m*	11.00		
		43	100 watt *m*	14.00		
		4	150 watt *m*	12.00		
		12	200 watt *m*	9.34		
		66	200 watt *m*	14.00		
		621	300 watt *m*	18.00		
		40	300 watt *m*	20.00		
		124	500 watt *m*	35.00		
		46	500 watt *m*	40.00		
		1	750 watt stands. *m*	50.00		
London Twp.	....	63	100 watt *m*	12.00	1,232.50	**
		6	100 watt *m*	21.50		
		1	200 watt *m*	16.50		
		10	300 watt *m*	30.00		
		1	300 watt *m*	31.00		
Long Branch	4,140	197	100 watt *m*	13.00	4,543.86	1.10
		113	200 watt *m*	17.50		
Lucan	610	59	100 watt *m*	14.00	1,261.33	2.07
		21	300 watt stands. *m*	33.00		
Lucknow	1,034	63	100 watt *m*	18.00	1,610.00	1.56
		17	200 watt *m*	28.00		
Lynden	....	44	100 watt *m*	10.00	440.00	**
Madoc	1,108	344	25 watt *m*	3.00	1,347.00	1.22
		63	100 watt *m*	5.00		
Markdale	781	81	100 watt *m*	10.00	920.00	1.18
		11	100 c.p. *s*	10.00		
Markham	1,153	119	100 watt *m*	12.00	1,428.00	1.24

**Population not shown in Government statistics. *s* Series system. *m* Multiple system.

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STATEMENT "C"—Continued

Street Lighting Installation in Hydro Municipalities, December 31, 1939; showing Rate per Lamp, Cost to Municipality in 1939, and Cost per Capita.

Municipality	Population	Number of lamps	Size and style of lamps	Interim rate per lamp per annum	Cost to municipality in 1939	Cost per capita
				$ c.	$ c.	$ c.
Marmora	995	44	75 watt *m*	13.00	1,298.00	1.30
		24	100 watt *m*	16.00		
		19	150 watt *m*	18.00		
Martintown		16	100 watt *m*	11.00	172.33	**
Maxville	758	67	150 c.p. *s*	18.00	1,199.25	1.58
Meaford	2,811	188	150 c.p. *s*	11.00	3,040.92	1.08
		28	100 watt *m*	11.00		
		35	200 watt *m*	19.00		
Merlin	....	46	100 watt *m*	15.00	705.72	**
		1	Decorative string *m*	51c. per 100 watts per month		
		2	Floodlights			
Merritton	2,656	312	100 watt *m*	9.00	3,354.00	1.26
		26	200 watt *m*	21.00		
Midland	6,669	328	150 c.p. *s*	11.00	6,376.00	0.96
		52	100 watt *m*	11.00		
		8	‡300 watt (6 mos.) *m*	12.00		
		30	300 watt *m*	22.00		
		36	500 watt *m*	40.00		
Mildmay	754	46	100 watt *m*	10.00	699.04	0.93
		11	150 watt *m*	16.00		
Millbrook	737	34	60 watt *m*	13.50	867.60	1.18
		20	100 watt *m*	16.00		
		3	300 watt *m*	25.00		
Milton	1,848	125	100 watt *m*	9.50	1,937.52	1.05
		25	300 watt *m*	30.00		
Milverton	1,010	99	100 watt *m*	9.00	1,035.00	1.02
		12	200 watt *m*	12.00		
Mimico	7,012	319	100 watt *m*	12.00	7,942.16	1.13
		73	200 watt *m*	20.00		
		111	300 watt *m*	26.00		
Mitchell	1,615	196	150 c.p. *s*	9.00	2,547.00	1.58
		27	300 watt *m*	29.00		
Moorefield	....	25	100 watt *m*	14.00	350.00	**
Morrisburg	1,853	228	100 watt *m*	12.00	2,736.00	1.48
Mount Brydges	....	47	100 watt *m*	10.00	844.00	**
		1	200 watt *m*	17.00		
		17	200 watt orn. *m*	21.00		
Mount Forest	1,840	162	100 watt *m*	10.00	2,171.25	1.18
		37	150 watt *m*	13.00		
		3	200 watt *m*	15.00		
		6	300 watt *m*	20.00		

**Population not shown in Government statistics. *s* Series system. *m* Multiple system.
‡Dock lights owned by Dominion Government.

STATEMENT "C"—Continued

Street Lighting Installation in Hydro Municipalities, December 31, 1939; showing Rate per Lamp, Cost to Municipality in 1939, and Cost per Capita.

Municipality	Population	Number of lamps	Size and style of lamps	Interim rate per lamp per annum	Cost to municipality in 1939	Cost per capita
				$ c.	$ c.	$ c.
Napanee	3,148	156	100 watt *m*	12.00	4,213.00	1.34
		2	250 watt *m*	28.00		
		2	250 watt *m*	30.00		
		40	300 watt *m*	34.00		
		5	300 watt stands. *m*	27.00		
		21	400 watt clusters *m*	36.00		
Neustadt	455	39	150 c.p. *s*	20.00	780.00	1.71
Newbury	288	47	100 watt *m*	15.00	705.00	2.45
Newcastle	700	51	60 watt *m*	12.00	650.84	0.93
		2	100 watt *m*	15.00		
New Hamburg	1,458	165	100 watt *m*	9.00	2,217.00	1.52
		61	200 watt *m*	12.00		
New Toronto	7,140	103	75 watt *m*	13.00	7,495.84	1.05
		8	150 watt *m*	15.50		
		16	200 watt *m*	17.00		
		126	300 watt *m*	24.00		
		14	300 watt *m*	22.00		
		107	300 watt *m*	21.00		
		3	1,000 watt *m* (floodlight)	52.00		
Niagara Falls	18,928	838	100 c.p. *s*	11.00	27,533.38	1.45
		13	250 c.p. *s*	13.00		
		65	600 c.p. *s*	18.00		
		284	600 c.p. orn. *s*	37.00		
		196	1,000 c.p. orn. *s*	42.00		
		1	100 watt *m*	11.00		
Niagara-on-the-Lake	1,670	212	100 watt *m*	11.00	3,483.02	2.08
		5	200 watt *m*	18.00		
		58	300 watt *m*	20.00		
Nipigon	....	34	100 watt *m*	11.00	593.00	**
		9	200 watt *m*	21.00		
North York Twp.		82	100 watt *m*	12.00	4,039.93	**
		20	100 watt *m*	13.00		
		45	100 watt *m*	13.50		
		11	100 watt *m*	15.00		
		2	100 watt *m*	15.50		
		10	100 watt *m*	16.50		
		11	100 watt *m*	17.70		
		1	100 watt *m*	18.00		
		1	100 watt *m*	19.00		
		65	200 watt *m*	23.00		
		1	400 watt *m* (floodlight)	31.00		
		2	1,000 watt *m* (floodlight)	65.00		
		1	100 watt *m* (Police sign)	12.00		

**Population not shown in Government statistics. *s* Series system. *m* Multiple system.

STATEMENT "C"—Continued

Street Lighting Installation in Hydro Municipalities, December 31, 1939; showing Rate per Lamp, Cost to Municipality in 1939, and Cost per Capita.

Municipality	Population	Number of lamps	Size and style of lamps	Interim rate per lamp per annum	Cost to municipality in 1939	Cost per capita
				$ c.	$ c.	$ c.
Norwich........	1,365	112	100 watt *m*	10.00	2,100.00	1.54
		28	400 watt *m*	35.00		
Norwood.......	710	77	100 c.p. *s*	18.00	1,612.90	2.27
		10	250 c.p. *s*	21.00		
Oil Springs.....	514	41	100 watt *m*	18.00	768.00	1.49
		1	300 watt (6 mos.) *m*	30.00		
Omemee........	553	50	100 c.p. *s*	14.00	1,030.08	1.86
		4	100 watt *m*	12.50		
		10	250 watt *m*	28.00		
Orangeville.....	2,660	98	150 c.p. *s*	10.00	2,793.30	1.05
		50	250 c.p. *s*	16.00		
		38	300 watt *m*	23.00		
Oshawa........	24,756	859	100 c.p. *s*	11.00	12,070.66	0.49
		51	100 watt *m*	12.00		
		112	150 watt *m*	13.00		
		30	200 watt *m*	18.00		
		1	500 watt *m*	27.00		
Ottawa.........	144,202	351	100 c.p. *s*	7.00	78,778.41	0.55
		870	400 c.p. *s*	25.00		
		892	600 c.p. *s*	35.00		
		59	Arcs *s*	45.00		
		779	100 watt *m*	6.00		
		44	500 watt *m*	35.00		
		2,795	100 watt (Whiteway)	48c. per foot		
		30	100 watt *m*	5½c. per foot		
Otterville.......	....	59	100 watt *m*	11.00	847.38	**
		13	200 watt *m*	16.00		
Owen Sound....	13,411	450	150 c.p. *s*	11.00	11,784.50	0.88
		342	400 c.p. *s*	14.00		
		16	600 c.p. *s*	21.00		
		47	1,000 c.p. *s*	35.00		
Paisley.........	729	90	100 watt *m*	13.00	1,170.00	1.60
Palmerston.....	1,406	66	80 c.p. *s*	9.00	2,628.00	1.87
		1	400 c.p. *s*	25.00		
		11	60 watt *m*	9.00		
		25	100 watt *m*	10.00		
		9	150 watt *m*	10.00		
		4	250 watt *m*	25.00		
		19	300 watt *m*	25.00		
		1	500 watt *m*	35.00		
		32	300 watt stands. *m*	30.00		
Paris...........	4,369	477	100 c.p. *s*	8.50	5,586.49	1.28
		10	400 watt *m*	28.00		
		34	500 watt *m*	35.00		
		2	60 watt *m*	7.00		

**Population not shown in Government statistics. *s* Series system. *m* Multiple system.

STATEMENT "C"—Continued

Street Lighting Installation in Hydro Municipalities, December 31, 1939; showing Rate per Lamp, Cost to Municipality in 1939, and Cost per Capita.

Municipality	Population	Number of lamps	Size and style of lamps	Interim rate per lamp per annum	Cost to municipality in 1939	Cost per capita
				$ c.	$ c.	$ c.
Parkhill........	900	88	100 watt *m*	14.00	1,577.04	1.75
		15	200 watt *m*	23.00		
Penetanguishene.	4,094	192	150 c.p. *s*	11.00	2,291.00	0.56
		1	200 watt *m*	15.00		
		6	300 watt *m*	20.00		
		4	100 watt *m*	11.00		
Perth..........	4,174	82	100 c.p. *s*	17.00	2,841.50	0.68
		15	250 c.p. *s*	27.00		
		7	400 c.p. *s*	30.00		
		19	600 c.p. *s*	45.00		
Peterborough...	23,984	122	60 watt *m*	12.00	22,268.00	0.93
		373	100 watt *m*	13.00		
		607	300 watt *m*	20.00		
		85	300 watt orn. *m*	45.00		
Petrolia........	2,747	151	150 c.p. *s*	12.00	2,839.00	1.03
		24	600 c.p. *s*	43.00		
Picton.........	3,439	322	100 c.p. *s*	9.00	3,672.19	1.07
		3	250 c.p. *s*	15.00		
		29	600 c.p. *s*	31.00		
Plattsville......	....	34	100 watt *m*	12.00	408.00	**
Point Edward...	1,177	103	150 c.p. *s*	13.00	1,666.34	1.42
		15	250 c.p. *s*	20.00		
		4	400 c.p. *s*	22.00		
Port Arthur.....	20,872	2,709	100 watt *m*	5.00	19,590.56	0.94
		232	300 watt *m*	10.00		
		208	500 watt *m*	15.00		
Port Colborne...	6,503	15	400 c.p. *s*	25.00	8,336.37	††
		78	600 c.p. *s*	30.00		
		227	100 watt *m*	14.00		
		34	100 watt *m*	12.00		
		132	200 watt *m*	18.00		
Port Credit.....	1,901	283	100 watt *m*	9.50	2,669.60	1.40
Port Dalhousie..	1,590	129	100 watt *m*	12.00	1,578.00	0.99
		2	200 watt *m*	15.00		
Port Dover.....	1,705	204	100 watt *m*	10.00	2,712.12	1.59
		15	300 watt *m*	18.00		
		34	100 watt (Summer) *m*	6.00		
		4	300 watt (Summer) *m*	10.00		
		236	25 watt (Decorative) *m*	67c. per 100 watts per month		
Port Elgin......	1,321	223	100 watt (4 mos.) *m*	14.00	2,732.72	2.07
		120	100 watt *m*	14.00		
		26	200 watt *m*	22.00		

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STATEMENT "C"—Continued

Street Lighting Installation in Hydro Municipalities, December 31, 1939; showing Rate per Lamp, Cost to Municipality in 1939, and Cost per Capita.

Municipality	Population	Number of lamps	Size and style of lamps	Interim rate per lamp per annum	Cost to municipality in 1939	Cost per capita
				$ c.	$ c.	$ c.
Port Hope......	4,724	402	100 c.p. *s*	10.00	4,004.76	0.85
		2	250 c.p. *s*	22.00		
Port McNicoll..	905	66	100 watt *m*	10.00	938.00	1.04
		18	200 watt *m*	16.00		
Port Perry......	1,128	91	100 watt *m*	15.00	1,665.00	1.48
		10	300 watt *m*	30.00		
Port Rowan....	556	56	100 watt *m*	15.00	867.16	1.56
Port Stanley....	737	217	100 watt *m*	11.00	2,452.30	3.33
		8	200 watt *m*	14.00		
Prescott........	2,925	218	100 watt *m*	10.00	3,644.70	1.25
		78	200 watt *m*	17.00		
Preston........	6,422	135	150 c.p. *s*	11.00	5,523.67	0.86
		216	100 watt *m*	11.00		
		9	250 watt *m*	20.00		
		40	500 watt *m*	32.00		
		6	500 watt stands. *m*	35.00		
Priceville.......	....	16	100 watt *m*	30.00	480.00	**
Princeton.......	....	39	100 watt *m*	12.00	468.00	**
Queenston......	....	20	100 watt *m*	16.00	312.03	**
Richmond......	403	26	100 watt *m*	15.00	390.00	0.97
Richmond Hill..	1,317	100	75 watt *m*	11.00	1,470.00	1.12
		19	100 watt *m*	12.00		
		9	200 watt *m*	16.00		
Ridgetown......	1,958	182	150 c.p. *s*	8.50	3,534.79	††
		1	1,000 c.p. *s*	38.00		
		89	100 watt *m*	8.50		
		17	200 watt *m*	16.00		
		2	200 watt orn. *m*	16.00		
		2	250 watt *m*	18.00		
		20	500 watt *m*	33.00		
Ripley.........	442	43	100 watt *m*	20.00	1,073.14	2.43
		2	200 watt *m*	35.00		
Riverside.......	5,090	276	75 watt *m*	9.00	3,567.74	††
		83	150 watt *m*	13.00		
		7	200 watt *m*	15.00		
		4	300 watt *m*	18.50		
Rockwood......	....	88	100 watt *m*	9.00	789.75	**
Rodney........	695	69	100 watt *m*	10.00	1,285.71	1.85
		23	300 watt *m*	25.00		
			Decorative lights *m*	20.71		
Rosseau........	305	47	100 watt *m*	30.00	1,410.00	4.62

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STATEMENT "C"—Continued

Street Lighting Installation in Hydro Municipalities, December 31, 1939; showing Rate per Lamp, Cost to Municipality in 1939, and Cost per Capita.

Municipality	Population	Number of lamps	Size and style of lamps	Interim rate per lamp per annum	Cost to municipality in 1939	Cost per capita
				$ c.	$ c.	$ c.
Russell.........	....	49	100 watt *m*	16.00	784.00	**
St. Catharines...	27,647	2,334	100 watt *m*	8.00	26,669.12	††
		19	100 watt orn. *m*	10.00		
		157	200 watt *m*	11.00		
		71	200 watt orn. *m*	20.00		
		5	200 watt *m*	14.00		
		5	500 watt *m*	20.00		
		106	500 watt orn. *m*	34.00		
		17	500 watt (bridge) *m*	20.00		
		11	1,000 watt *m*	40.00		
St. George......	....	39	100 watt *m*	10.00	427.91	**
		1	750 watt *m*	38.00		
St. Jacobs......	....	43	100 watt *m*	10.00	430.00	**
St. Marys......	4,033	235	100 c.p. *s*	10.50	4,890.50	1.21
		106	250 c.p. *s*	14.00		
		20	150 watt *m*	12.00		
		32	300 watt *m*	22.00		
St. Thomas.....	16,352	1,105	100 c.p. *s*	9.00	14,905.92	††
		28	250 c.p. *s*	13.00		
		2	600 c.p. *s*	32.00		
		114	600 c.p. *s*	34.00		
		7	60 watt (5 mos.) *m*	3.00		
		6	60 watt *m*	4.50		
		30	100 watt (5 mos.) *m*	5.00		
		2	100 watt *m*	10.00		
		22	300 watt *m*	22.00		
Sarnia..........	18,269	1,073	150 c.p. *s*	12.00	20,424.23	††
		55	250 c.p. *s*	16.50		
		72	400 c.p. *s*	22.00		
		77	600 c.p. *s*	35.00		
		14	600 c.p. *s*	45.00		
		7	100 watt *m*	12.00		
		8	150 watt *m*	16.50		
		5	250 watt *m*	22.00		
		14	300 watt *m*	32.00		
Scarboro Twp...	....	210	100 c.p. *s*	12.00	15,713.43	**
		10	Empty sockets *s*	9.00		
		4	250 c.p. *s*	17.00		
		20	40 watt *m*	12.00		
		2	60 watt *m*	18.00		
		436	100 watt *m*	12.00		
		22	Empty sockets *m*	9.00		
		12	200 watt *m*	17.00		
		21	200 watt *m*	21.00		
		171	300 watt *m*	24.00		
		5	300 watt *m*	26.00		
		134	Empty sockets *m*	14.50		
		2	100 watt *m*	11.50		
		11	100 watt *m*	17.50		
		9	200 watt *m*	15.50		

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STATEMENT "C"—Continued

Street Lighting Installation in Hydro Municipalities, December 31, 1939; showing Rate per Lamp, Cost to Municipality in 1939, and Cost per Capita.

Municipality	Population	Number of lamps	Size and style of lamps	Interim rate per lamp per annum	Cost to municipality in 1939	Cost per capita
				$ c.	$ c.	$ c.
Seaforth	1,705	123	100 c.p. *s*	9.50	2,107.50	1.24
		19	300 watt *m*	25.00		
		16	300 watt orn. *m*	29.00		
Shelburne	1,043	98	150 c.p. *s*	9.00	875.25	0.84
Simcoe	6,052	289	100 c.p. *s*	11.00	4,986.96	††
		11	250 c.p. *s*	15.00		
		13	400 c.p. *s*	18.00		
		27	1,000 c.p. *s*	40.00		
		11	150 watt *m*	11.00		
		8	200 watt *m*	15.00		
		6	200 watt orn. *m*	24.00		
		1	500 watt *m*	53.00		
		1	1,000 watt *m*	60.00		
Smiths Falls	7,672	18	50 watt *m*	9.00	7,489.92	0.98
		101	100 watt *m*	14.00		
		2	200 watt *m*	20.00		
		267	300 watt *m*	22.00		
Southampton	1,441	114	100 watt *m*	12.00	2,456.68	1.70
		55	250 watt *m*	17.00		
		50	60 watt (3 mos.) *m*	12.00		
		1	Decorative string *m*	36.00		
Springfield	378	53	100 watt *m*	11.00	611.50	1.62
		3	100 watt *m*	9.50		
Stamford Twp.	....	893	100 watt *m*	9.00	7,857.75	**
Stayner	1,043	81	100 c.p. *s*	10.00	1,130.00	1.08
		20	200 watt *m*	16.00		
Stirling	960	107	150 watt *m*	10.00	1,607.04	1.67
		2	300 watt *m*	24.75		
		15	500 watt *m*	32.50		
Stouffville	1,160	127	100 watt *m*	12.00	1,524.00	1.31
Stratford	17,159	891	100 c.p. *s*	10.00	16,887.79	0.98
		81	600 c.p. *s*	25.00		
		131	600 c.p. *s*	30.00		
		11	1,000 c.p. *s*	35.00		
		49	1,000 c.p. *s*	34.00		
		2	100 watt *m*	10.00		
		4	500 watt *m*	34.00		
Strathroy	2,917	303	100 c.p. *s*	9.00	4,078.79	1.40
		21	250 c.p. *s*	15.00		
		17	600 watt *m*	62.00		

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STATEMENT "C"—Continued

Street Lighting Installation in Hydro Municipalities, December 31, 1939; showing Rate per Lamp, Cost to Municipality in 1939, and Cost per Capita.

Municipality	Population	Number of lamps	Size and style of lamps	Interim rate per lamp per annum	Cost to municipality in 1939	Cost per capita
				$ c.	$ c.	$ c.
Streetsville.....	700	42	100 watt *m*	9.50	1,005.50	1.44
		28	200 watt *m*	11.50		
		13	300 watt *m*	16.50		
			Decorative lighting *m*	70.00		
Sudbury........	26,463	759	100 c.p. *s*	12.00	21,907.37	0.83
		120	250 c.p. *s*	16.00		
		10	600 c.p. *s*	28.00		
		42	600 c.p. stands. *s*	50.00		
		10	1,000 c.p. *s*	35.00		
		43	1,000 c.p. stands. *s*	57.00		
		45	1,500 c.p. *s*	65.00		
		49	1,800 c.p. mercury vapor *s*	65.00		
Sunderland.....	....	29	100 watt *m*	20.00	720.00	**
		4	500 watt *m*	35.00		
Sutton.........	852	128	100 watt *m*	13.00	2,148.85	2.52
		27	200 watt *m*	17.00		
		38	Decorative strings (3 mos.) *m*	13.00		
Swansea........	5,831	226	100 watt *m*	12.00	3,750.20	0.64
		59	200 watt *m*	19.00		
Tara...........	474	61	100 watt *m*	10.00	1,168.00	2.46
		17	300 watt *m*	30.00		
Tavistock......	1,063	85	100 watt *m*	10.00	1,317.60	1.24
		39	200 watt *m*	12.00		
Tecumseh......	2,237	18	400 c.p. *s*	22.00	1,299.00	††
		76	100 watt *m*	12.00		
		1	300 watt *m*	24.00		
Teeswater......	842	48	100 c.p. *s*	13.00	1,118.00	1.33
		15	250 c.p. *s*	26.00		
Thamesford.....	....	48	100 watt *m*	11.00	528.00	**
Thamesville.....	833	69	100 watt *m*	9.00	1,367.98	1.64
		34	200 watt *m*	14.00		
		7	200 watt orn. *m*	18.00		
		1	250 watt *m*	17.50		
Thedford.......	595	70	100 watt *m*	15.00	1,050.00	1.76
Thorndale......	....	32	100 watt *m*	12.00	384.00	**
Thornton.......	....	25	100 watt *m*	25.00	566.67	**
Thorold........	5,001	403	75 watt *m*	7.50	3,488.42	0.70
		2	100 watt *m*	8.00		
		35	200 watt *m*	12.00		
		2	300 watt *m*	15.00		

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STATEMENT "C"—Continued

Street Lighting Installation in Hydro Municipalities, December 31, 1939; showing Rate per Lamp, Cost to Municipality in 1939, and Cost per Capita.

Municipality	Population	Number of lamps	Size and style of lamps		Interim rate per lamp per annum	Cost to municipality in 1939	Cost per capita
					$ c.	$ c.	$ c.
Tilbury........	1,980	107	100 watt	*m*	12.00	1,809.89	0.91
		25	200 watt	*m*	20.00		
		140	25 watt	*m*	38c. per 100 watts per month		
Tillsonburg.....	3,945	285	100 c.p.	*s*	9.50	5,064.66	1.28
		1	250 c.p.	*s*	13.00		
		12	300 watt	*m*	32.00		
		44	500 watt	*m*	42.00		
		1	Traffic light	*m*	18.36		
			Decorative lighting	*m*	120.00		
Toronto........	647,803	46,387	100 watt	*m*	8.00–10.00	509,960.02	0.79
		4,161	200 watt	*m*	14.00–20.00		
		1,435	300 watt	*m*	20.00–25.00		
		191	500 watt	*m*	35.00–40.00		
		391	1-lt. stds. 300 w.	*m*	40.00		
		354	1-lt. stds. 500 w.	*m*	47.50		
		153	5-lt. stds. 100 w.	*m*	47.50		
Toronto Twp...	....	432	100 watt	*m*	11.50	4,922.88	**
		1	Intersection light	*m*	43.20		
Tottenham.....	557	49	150 c.p.	*s*	18.00	882.00	1.58
Trenton........	6,833	48	600 c.p.	*s*	63.00	6,964.13	1.02
		308	100 watt	*m*	10.50		
		1	500 watt	*m*	63.00		
		53	200 watt	*m*	15.00		
Tweed.........	1,228	134	100 c.p.	*s*	15.00	2,023.71	1.65
		2	100 c.p. (special)	*s*	20.00		
Uxbridge.......	1,509	132	100 watt	*m*	11.00	1,587.00	1.05
		6	100 watt (5 mos.)	*m*	8.00		
		1	200 watt	*m*	16.00		
		1	200 watt (5 mos.)	*m*	11.00		
		3	300 watt	*m*	20.00		
Victoria Harbor.	1,023	78	100 watt	*m*	8.50	663.00	0.65
Walkerton......	2,463	120	150 c.p.	*s*	14.00	2,861.28	1.16
		40	250 c.p.	*s*	24.50		
		1	50 watt	*m*	6.00		
		8	100 watt	*m*	14.00		
			Decorative lights	*m*	100.00		
Wallaceburg....	4,715	222	150 c.p.	*s*	12.00	4,634.67	0.98
		18	400 c.p.	*s*	22.00		
		56	300 watt	*m*	31.00		
Wardsville......	236	36	100 watt	*m*	20.00	720.00	3.05
Warkworth.....	....	42	100 watt	*m*	13.00	615.00	**
		2	200 watt	*m*	23.00		

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STATEMENT "C"—Continued

Street Lighting Installation in Hydro Municipalities, December 31, 1939; showing Rate per Lamp, Cost to Municipality in 1939, and Cost per Capita.

Municipality	Population	Number of lamps	Size and style of lamps	Interim rate per lamp per annum	Cost to municipality in 1939	Cost per capita
				$ c.	$ c.	$ c.
Waterdown.....	904	80	100 watt *m*	10.00	936.00	1.04
		8	200 watt *m*	17.00		
Waterford......	1,216	157	100 watt *m*	8.00	1,488.00	1.22
		10	200 watt *m*	15.00		
		1	500 watt *m*	25.00		
Waterloo.......	8,524	378	80 c.p. *s*	8.00	7,779.70	††
		120	100 c.p. *s*	10.00		
		93	150 watt *m*	10.00		
		5	200 watt *m*	12.00		
		18	300 watt *m*	21.00		
		3	500 watt *m*	30.00		
		9	500 watt *m*	35.00		
		10	300 watt3-lt.stds. *m*	25.00		
		44	450 watt5-lt.stds. *m*	36.00		
Watford........	964	91	100 watt *m*	12.50	1,626.16	1.69
		16	300 watt *m*	31.00		
Waubaushene...	....	48	100 watt *m*	9.00	482.00	**
		10	100 watt (5 mos.) *m*	5.00		
Welland........	11,072	177	600 c.p. orn. *s*	30.00	11,323.13	††
		14	600 c.p. (Park) *s*	30.00		
		466	100 watt *m*	11.00		
		25	200 watt *m*	18.00		
		6	300 watt orn. *m*	30.00		
		3	500 watt *m*	28.00		
		6	Empty sockets *m*	18.00		
Wellesley.......	....	60	100 watt *m*	11.00	660.00	**
Wellington......	916	84	100 c.p. *s*	12.00	1,087.32	1.19
		5	150 c.p. *s*	19.00		
West Lorne.....	837	88	100 watt *m*	10.00	1,060.02	1.27
		10	200 watt *m*	18.00		
Weston.........	5,099	423	100 c.p. *s*	7.50	7,303.26	1.43
		15	100 c.p. *s*	9.50		
		111	600 c.p. *s*	30.00		
		20	300 watt *m*	11.00		
		5	100 watt5-lt.stds. *m*	21.00		
		2	Municipal signs *m*	110.00		
Westport.......	710	2	50 watt *m*	10.00	1,322.27	1.86
		70	100 watt *m*	19.00		
Wheatley.......	760	64	100 watt *m*	13.00	1,496.12	1.97
		42	150 watt *m*	16.00		
Whitby........	3,724	129	80 c.p. *s*	11.00	4,087.06	1.10
		69	100 c.p. *s*	12.00		
		165	100 watt *m*	9.50		
		3	150 watt *m*	10.00		
		3	500 watt *m*	15.00		

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STATEMENT "C"—Concluded

Street Lighting Installation in Hydro Municipalities, December 31, 1939; showing Rate per Lamp, Cost to Municipality in 1939, and Cost per Capita.

Municipality	Population	Number of lamps	Size and style of lamps	Interim rate per lamp per annum	Cost to municipality in 1939	Cost per capita
				$ c.	$ c.	$ c.
Wiarton	1,723	112	100 watt *m*	14.00	2,449.30	1.42
		26	200 watt *m*	23.00		
Williamsburg	....	16	100 watt *m*	15.00	240.00	**
Winchester	1,040	118	100 watt *m*	8.00	944.00	0.91
Windermere	118	13	100 watt *m*	28.00	364.00	3.08
Windsor	103,813	886	100 c.p. *s*	11.00	103,365.38	††
		99	250 c.p. *s*	15.00		
		172	400 c.p. *s*	19.00		
		4	600 c.p. *s*	26.00		
		2,435	100 c.p. orn. *s*	13.00		
		962	250 c.p. orn. *s*	17.00		
		748	400 c.p. orn. *s*	21.50		
		21	600 c.p. orn. *s*	29.50		
		27	1,000 c.p. orn. *s*	39.50		
		102	100 watt *m*	8.50		
		3	150 watt *m*	11.50		
		105	200 watt *m*	13.50		
		35	300 watt *m*	19.00		
		1,493	100 watt orn. *m*	10.00		
		184	150 watt orn. *m*	13.00		
		223	200 watt orn. *m*	15.00		
		1	300 watt orn. *m*	21.50		
Wingham	2,123	107	150 c.p. *s*	17.00	3,082.50	1.45
		25	250 c.p. *s*	30.00		
		22	200 watt *m*	30.00		
		8	Strings 200 watt ea. *m*	45c. per 100 watts per month		
Woodbridge	830	94	100 watt *m*	10.00	1,114.99	1.34
		2	300 watt *m*	23.00		
Woodstock	11,418	554	100 c.p. *s*	8.00	8,500.73	0.74
		11	250 c.p. *s*	20.00		
		136	100 watt *m*	8.00		
		4	150 watt *m*	12.00		
		99	300 watt *m*	24.00		
		1	250 watt *m* floodlight (6 mos.)	12.00		
		42	200 watt *m*	16.00		
Woodville	421	37	100 watt *m*	12.00	634.01	1.51
		5	500 watt *m*	38.00		
Wyoming	516	52	100 watt *m*	15.00	780.00	1.51
Zurich	....	63	100 watt *m*	11.00	693.00	**

**Population not shown in Government statistics. *s* Series system. *m* Multiple system.

††Certain additional street lighting costs for special service are paid direct in form of debenture charges.

STATEMENT "D"

(pages 328 to 345)

Statistics relating to the Supply of Electrical Energy to Consumers
in Ontario Urban Municipalities Served by
The Hydro-Electric Power Commission
for the year 1939

STATEMENT "E"

(pages 346 to 361)

Cost of Power to Municipalities and Rates to Consumers for
Domestic Service—Commercial Light Service—Power Service
in Ontario Urban Municipalities Served by
The Hydro-Electric Power Commission
for the year 1939

STATEMENT "D"

Statistics Relating to the Supply of Electrical Energy to Consumers in Urban Municipalities Served by The Hydro-Electric Power Commission

Regarding the results of Hydro operation from the standpoint of the consumers, the following tabulation gives much useful and interesting information. For each main class of service in each urban municipal utility receiving power at cost from the Commission, Statement "D" lists the revenue, the consumption and the number of consumers, together with unit average costs and consumptions and other pertinent data.

The policy and practice of the Commission has been, and is, to make as widespread and beneficial a distribution of electrical energy as possible, and to extend to every community that can economically be reached by transmission lines, the benefit of electrical service. Even where, in certain localities, by reason of the distance from a source of supply or on account of the small quantity of power required by the municipality, the cost per horsepower to the municipality—and, consequently, the cost of service to the consumer—must unavoidably be higher than in more favourably situated communities, service has not been withheld when the consumers were able and willing to pay the cost.

The accompanying diagram summarizes graphically certain data of Statement "D" respecting the average cost to the consumer. It will be observed that the total amount of energy sold in municipalities where circumstances necessitate rates which result in the higher average costs to the consumer is relatively insignificant. With respect to power service, it should be noted that the statistics of Statement "D", and of the diagram, cover mainly retail power service supplied to the smaller industrial consumers. The average amount of power taken by the industrial consumers served by the municipalities is about 45 horsepower. The Commission serves certain large power consumers direct on behalf of the various systems of municipalities.

It should be kept in mind that the revenues reported in Statement "D," and used for purposes of calculating the net unit costs to the consumer, are the total revenues contributed by the consumers, and provide, in addition to the cost of power, sums specifically applicable to the retirement of capital, and also operating surplus which is in part applied to retirement of capital or extension of plant and is in part returned in cash to the consumers.

It should also be noted that average costs per kilowatt-hour or per horsepower if employed indiscriminately as a criterion by means of which to compare the rates or prices for electrical service in various municipalities, will give misleading results. The average costs per kilowatt-hour, as given in Statement "D" for respective classes of service in each municipality, are statistical results obtained by dividing the respective revenues by the aggregate kilowatt-hours sold. As such, the data reflect the combined influence of a number of factors, of which the rates or prices to consumers are but one factor. Owing to the varying influence of factors other than the rates, it is seldom found that in any two municipalities the average cost per kilowatt-hour to the consumers, even of the same classification, is in proportion to the respective rates for service. Instances even occur where for a class of consumers in one municipality, the average costs per kilowatt-hour are substantially lower than for the same class in another municipality, even though the rates are higher.

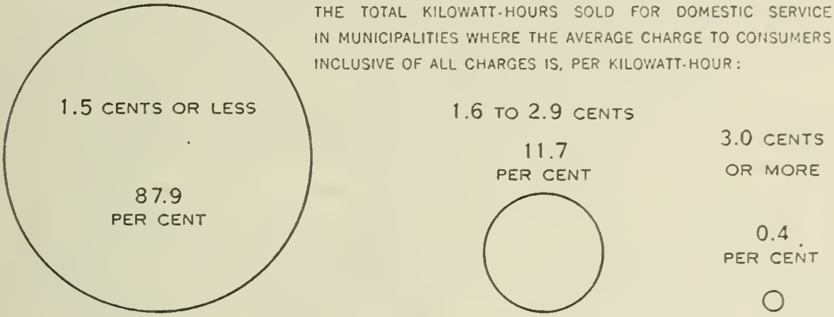
COST OF ELECTRICAL SERVICE

IN MUNICIPALITIES SERVED BY

THE HYDRO-ELECTRIC POWER COMMISSION OF ONTARIO

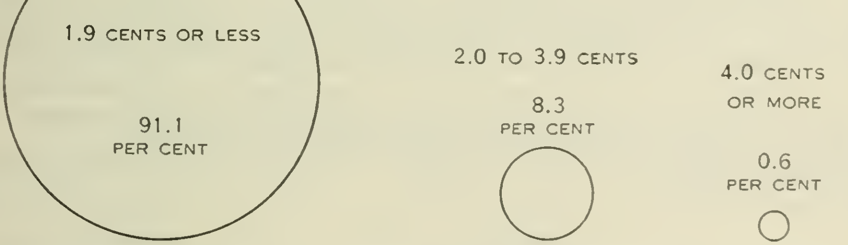
DOMESTIC SERVICE

THE AREAS OF THE CIRCLES REPRESENT PROPORTIONATELY THE TOTAL KILOWATT-HOURS SOLD FOR DOMESTIC SERVICE IN MUNICIPALITIES WHERE THE AVERAGE CHARGE TO CONSUMERS INCLUSIVE OF ALL CHARGES IS, PER KILOWATT-HOUR:



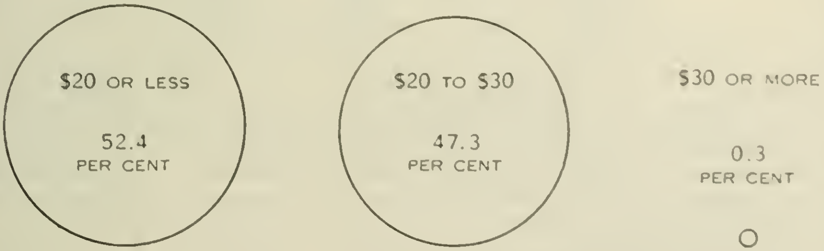
COMMERCIAL LIGHT SERVICE

THE AREAS OF THE CIRCLES REPRESENT PROPORTIONATELY THE TOTAL KILOWATT-HOURS SOLD FOR COMMERCIAL LIGHT SERVICE IN MUNICIPALITIES WHERE THE AVERAGE CHARGE TO CONSUMERS INCLUSIVE OF ALL CHARGES IS, PER KILOWATT-HOUR:



POWER SERVICE SUPPLIED BY MUNICIPALITIES

THE AREAS OF THE CIRCLES REPRESENT PROPORTIONATELY THE AGGREGATE HORSEPOWER SOLD FOR POWER SERVICE IN MUNICIPALITIES WHERE THE AVERAGE CHARGE TO CONSUMERS INCLUSIVE OF ALL CHARGES IS, PER HORSEPOWER PER YEAR:



With respect to domestic service, for example, instances may be observed where two municipalities have identical prices or rates for domestic service, but the average cost per kilowatt-hour to the consumer varies by as much as 50 per cent or more. Such variations are due principally to differences in the extent of utilization of the service for the operation of electric ranges, water heaters and other appliances, an indication of which is afforded by the statistics of average monthly consumption.

In the case of power service, average unit costs are still less reliable as an indication of the relative rates for service in different municipalities. In the case of hydro-electric power supplied to industries at cost, the rate schedules incorporate charges both for demand and for energy consumption, and thus, although the quantity of power taken by a consumer—that is, the demand as measured in horsepower—is the most important factor affecting costs and revenues, it is not the only one. The number of hours the power is used in the month or year—which, in conjunction with the power, determines the energy consumption, as measured in kilowatt-hours—also affects the costs and revenues. Consequently, in two municipalities charging the same rates for power service, the average cost per horsepower to the consumer will vary in accordance with the consumers' average number of hours' use of the power per month. A greater average energy consumption per horsepower increases the average cost per horsepower and decreases the average cost per kilowatt-hour to the consumer, and *vice versa.**

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*In view of the fact that the data of Statement "D" have been misinterpreted in the making of certain comparisons as to the cost of electricity in various territories, it is desirable to add a word of caution respecting their significance. Essentially, the average cost or revenue per kilowatt-hour is *not a criterion of rates* even with similar forms of rate schedules and for the same class of service. Particularly is this true when revenues and consumptions of all classes of service and of all kinds of rate schedules, are indiscriminately lumped together in order to deduce a so-called "average cost or rate per kilowatt-hour" for all services.

In one community rates for each class of service, and the cost to every consumer in each class for any given service and consumption, may be substantially higher than in another community, and yet there may be in the former community a lower "average revenue per kilowatt-hour."

EXAMPLE.—Assume sales of electrical energy by two electric utilities, A and B, in each case 10,000,000 kilowatt-hours.

Class of service	CASE A Higher rates and lower revenues per kilowatt-hour			CASE B Lower rates and higher revenues per kilowatt-hour		
	Energy sales	Rate per kw-hr.	Revenue	Energy sales	Rate per kw-hr.	Revenue
	kw-hr.	cents	$	kw-hr.	cents	$
Residence..........	1,000,000	4	40,000	3,000,000	3	90,000
Power.............	9,000,000	1	90,000	7,000,000	0.75	52,500
Total...........	10,000,000	....	130,000	10,000,000	....	142,500
Average revenue....	1.3 cents per kw-hr.			1.425 cents per kw-hr.		

It will be observed that in Case A *the rates* both for residence and for power service are 33 per cent *higher* than in Case B, but the *average revenue* per kilowatt-hour is nearly 9 per cent less.

In this instance, the explanation lies in the *relative quantities* of energy sold to each class· Service to large power consumers entails a smaller capital investment in distribution lines and equipment and lower operating costs per kilowatt-hour delivered, than does service to domestic and to commercial light consumers, and even where the rates for all classes of service are low, produces a smaller average revenue per kilowatt-hour. Consequently, if one electrical utility as compared with another sells a larger proportion of its energy for power purposes, its "average revenue per kilowatt-hour" may easily be lower than that of the other utility even though its rates for every class of service are substantially higher.

Although the derived statistics of Statement "D" are valueless as a means of comparing the *rates* in one municipality with those in another, they nevertheless fulfil a function in affording a general measure of the *economy of service* to consumers in the co-operating Ontario municipalities—an economy that has resulted primarily from the low rates themselves, and secondarily from the extensive use of the service that has been made possible by the low rates.

Actual bills rendered to typical consumers for similar service under closely comparable circumstances constitute the best basis for making comparisons. In researches respecting rates to consumers therefore the actual *rate schedules* of Statement "E" should be employed, and not statistics of average revenues per kilowatt-hour, as these are valueless for rate comparisons—and particularly so when all classifications of service are combined.

In any consideration of the relative economies of electrical service in the various municipalities—whether based on the actual rates for service as set forth in Statement "E", or on the derived statistics resulting from the rates and other factors as presented in Statement "D"—full account should be taken respectively of the influence upon costs of such factors as the size of the municipality, the distance from the source of power, the features of the power developments, the sizes and concentrations of adjacent markets for electricity, and the sizes and characters of the loads supplied under the various classifications by the local electrical utility to the consumers.

In Statement "D" account has been taken of the sizes of municipalities by grouping them according to whether they are (i) cities—over 10,000 population; (ii) towns of 2,000 to 10,000 population; or (iii) small towns (under 2,000 population), villages, and suburban areas in townships (which are comparable in respect of conditions of supply to the smaller towns and villages). The populations are also given, and the situation of any municipality with respect to transmission lines and power supplies may be ascertained by consulting the maps at the end of the Report.

A feature of the electrical service in Ontario municipalities served by The Hydro-Electric Power Commission is the strikingly large average annual consumption per domestic consumer. There are very few Ontario urban municipalities where the average annual consumption per domestic consumer is less than 600 kilowatt-hours. Of the 87 cities and towns with populations of 2,000 or more—in which over 85 per cent of the domestic consumers of the undertaking are served—no less than 78 have an average annual consumption per domestic consumer in excess of 1,000 kilowatt-hours; of these, 45 have an average annual consumption per domestic consumer in excess of 1,500 kilowatt-hours, and 21 have an average annual consumption per domestic consumer in excess of 2,000 kilowatt-hours.

The high average consumption for domestic service results essentially from the policy of the undertaking in providing service "at cost"; the rate schedules designed according to this principle automatically encourage liberal use of the service. Under the standard rate schedules employed by Ontario municipalities, follow-up rates of 1 cent and 1.25 cents (less 10 per cent) are in common use, and as a rule even where the higher initial rates per kilowatt-hour obtain, it is only necessary for the domestic consumer to reach a monthly charge of from $2.00 to $3.00 to obtain the benefit of a follow-up rate of 1.8 cents net. The cost of electric cooking is thus within reach of most of the domestic consumers in Ontario. Electric water heating is also encouraged by low flat rates for continuous heaters and by installation of equipment without capital cost to the consumer.

STATEMENT

Statistics Relating to the Supply of Electric Energy to Consumers For Domestic Service, for Commercial Light Service

Group I—CITIES

Municipality	System	Population	Domestic service					
			Revenue	Consumption	Number of consumers	Average monthly consumption	Average monthly bill	Net cost per kw-hr.
			$ c.	kw-hr.		kw-hr.	$ c.	cents
Belleville	E.O.	14,589	75,070.91	8,303,016	3,314	209	1.89	0.9
Brantford	Nia.	31,369	170,626.49	13,764,737	7,693	149	1.85	1.2
Chatham	Nia.	16,517	90,972.33	5,391,407	4,127	108	1.83	1.7
Fort William	T.B.	24,301	197,320.43	31,694,170	5,841	452	2.81	0.6
Galt	Nia.	14,219	93,458.17	6,942,887	3,900	148	2.00	1.3
Guelph	Nia.	21,514	109,406.55	9,599,708	5,355	149	1.70	1.1
Hamilton	Nia.	154,751	834,807.68	70,245,780	39,342	148	1.77	1.2
Kingston	E.O.	23,355	139,065.46	12,345,472	6,362	162	1.82	1.1
Kitchener	Nia.	33,080	191,096.62	18,416,891	7,773	197	2.05	1.0
London	Nia.	73,846	527,069.93	49,918,615	17,962	232	2.45	1.1
Niagara Falls	Nia.	18,928	122,155.21	11,357,489	4,633	204	2.20	1.1
Oshawa	E.O.	24,756	178,077.15	11,374,096	6,334	150	2.34	1.6
Ottawa	E.O.	144,202	532,085.02	60,789,128	13,933	364	3.18	0.8
Owen Sound	G.B.	13,411	61,028.31	4,526,763	3,373	112	1.51	1.3
Peterborough	E.O.	23,984	155,334.42	13,083,194	5,739	190	2.25	1.2
Port Arthur	T.B.	20,872	115,345.20	12,967,610	4,972	217	1.93	0.9
St. Catharines	Nia.	27,647	134,293.12	12,286,525	6,996	146	1.60	1.1
St. Thomas	Nia.	16,352	120,555.72	11,937,144	4,310	231	2.33	1.0
Sarnia	Nia.	18,269	92,171.80	6,128,506	4,732	108	1.62	1.5
Stratford	Nia.	17,159	130,293.56	10,420,749	4,295	202	2.53	1.3
Sudbury	N.O.P.	26,463	209,478.98	11,987,360	6,731	148	2.59	1.7
Toronto	Nia.	647,803	4,433,549.64	369,243,266	165,384	186	2.23	1.2
Toronto D.C. and 60 cycle†	......	....	16,817.61	574,040	276	173	5.08	2.9
Welland	Nia.	11,072	54,828.34	3,633,701	2,546	119	1.79	1.5
Windsor	Nia.	103,813	694,025.14	47,627,347	23,557	168	2.46	1.5
Woodstock	Nia.	11,418	72,433.51	6,353,565	3,179	167	1.90	1.1

†This—with the exception of a relatively small D.C. power load—is a special service not created by The Hydro-Electric Power Commission but acquired through the purchase of a privately owned company. It does not include street railway power.

Group II—TOWNS

Amherstburg	Nia.	2,857	21,441.70	1,590,832	682	194	2.62	1.3
Arnprior	E.O.	4,059	16,651.71	783,704	763	86	1.82	2.1
Aylmer	Nia.	2,156	11,100.15	709,620	698	85	1.33	1.6
Barrie	G.B.	8,310	62,664.44	4,924,493	2,152	191	2.43	1.3
Bowmanville	E.O.	3,850	27,222.74	1,614,476	1,161	116	1.96	1.7
Brampton	Nia.	5,695	40,356.23	3,273,305	1,486	184	2.26	1.2
Brockville	E.O.	9,995	52,159.51	4,453,065	2,843	131	1.53	1.2
Carleton Place	E.O.	4,278	18,603.80	1,224,655	1,010	101	1.53	1.5
Cobourg	E.O.	5,307	34,441.01	2,016,816	1,447	116	1.98	1.7
Collingwood	G.B.	5,322	27,523.92	1,599,866	1,382	96	1.66	1.7
Delhi	Nia.	2,083	10,831.84	422,570	549	64	1.64	2.6
Dundas	Nia.	4,839	22,165.10	1,352,441	1,267	88	1.45	1.6
Dunnville	Nia.	3,928	13,959.08	813,185	948	71	1.23	1.7
Elmira	Nia.	2,074	14,785.29	930,090	527	147	2.34	1.6
Fergus	Nia.	2,792	18,394.08	1,022,438	721	118	2.13	1.8

"D"

in Ontario Municipalities Served by the Commission and for Power Service during the year 1939

Population, 10,000 or more

Commercial Light service						Power service			Total number of consumers
Revenue	Consumption	Number of consumers	Average monthly consumption	Average monthly bill	Net cost per kw-hr.	Revenue	Number of consumers	Average monthly horse-power	
$ c.	kw-hr.		kw-hr.	$ c.	cents	$ c.			
50,232.42	4,128,418	643	535	6.51	1.2	37,810.72	100	2,584.3	4,057
75,947.63	7,777,805	1,159	559	5.46	1.0	*127,180.26	162	7,764.9	9,014
84,482.07	5,490,648	792	577	8.90	1.5	78,305.44	108	3,813.9	5,027
70,166.68	4,485,015	930	402	6.29	1.6	68,682.35	117	3,633.4	6,888
44,152.99	2,680,578	503	444	7.31	1.6	114,973.83	110	6,181.0	4,513
54,815.24	4,639,224	789	490	5.79	1.2	125,419.99	138	7,670.5	6,282
456,944.77	40,378,468	5,170	651	7.36	1.1	1,749,315.75	1,264	105,427.0	45,776
89,951.79	6,877,792	943	608	7.95	1.3	110,582.58	155	6,205.3	7,460
119,999.12	8,940,259	1,085	687	9.22	1.3	302,783.56	253	15,631.5	9.111
205,150.49	16,340,270	2,146	635	7.97	1.3	421,736.76	449	22,768.3	20,557
61,692.64	5,650,282	716	658	7.18	1.1	80,720.67	91	4,611.5	5,440
69,268.55	3,505,805	562	520	10.27	2.0	236,935.29	107	11,251.6	7,003
202,576.09	12,789,423	1,381	771	12.22	1.6	72,478.94	189	4,537.9	15,503
41,539.35	2,847,309	578	411	5.99	1.5	44,383.01	99	2,665.0	4,050
85,351.84	5,087,896	931	455	7.64	1.7	127,918.97	160	6,939.3	6,830
67,007.50	5,842,304	821	593	6.80	1.1	656,008.55	109	38,168.5	5,902
66,906.72	5,627,482	866	541	6.44	1.2	158,022.59	160	10,839.5	8,022
53,457.20	4,625,058	627	614	7.10	1.2	58,645.11	81	3,755.7	5,018
49,454.90	3,610,660	666	452	6.19	1.4	148,720.28	81	6,585.7	5,479
55,393.78	3,251,388	602	450	7.67	1.7	59,927.52	116	3,007.4	5,013
161,430.19	5,046,139	1,059	397	12.70	3.2	51,875.32	140	1,920.2	7,930
2,929,249.50	184,897,618	24,913	618	9.79	1.6	‡3,807,993.31	4,293	165,174.0	194,590
71,202.82	1,708,990	484	294	12.26	4.2	308,452.04	763	11,683.0	1,523
32,956.71	2,262,336	486	388	5.65	1.5	100.152.67	84	4,998.3	3,116
352,996.44	22,801,719	3,165	600	9.29	1.5	529,953.02	450	26,032.6	27,172
42,872.56	3,212,575	482	555	7.41	1.3	80,236.53	95	5,126.3	3,756

NOTE—The above group of 25 cities utilizes about 80 per cent of the power distributed by the Commission to Ontario municipalities.

*Includes only 25-cycle data. ‡Does not include street railway power.

of Population, 2,000 or more

7,343.19	413,061	122	282	5.02	1.8	8,576.03	15	357.6	819
10,229.12	314,545	139	189	6.13	3.3	18,027.67	20	760.1	922
9,744.64	589,780	157	313	5.17	1.7	5,206.66	12	305.0	867
40,292.89	2,442,723	422	482	7.96	1.6	19,015.04	50	1,029.1	2,624
10,003.12	492,480	152	270	5.48	2.0	48,328.80	27	1,907.0	1,340
18,944.60	1,175,373	245	400	6.44	1.6	19,906.48	53	1,299.9	1,784
24,894.11	2,021,937	423	398	4.90	1.2	40,202.50	75	2,403.1	3,341
9,275.63	453,100	195	194	3.96	2.0	24,453.16	18	1,338.7	1,223
19,472.68	978,659	221	369	7.34	2.0	24.529.02	51	1,271.6	1,719
13,284.43	650,407	191	284	5.80	2.0	14,914.05	54	959.6	1,627
10,683.59	438,023	153	238	5.82	2.4	7,346.13	5	285.0	707
12,309.03	798,549	192	347	5.38	1.5	21,746.02	36	1,532.9	1.495
14,333.57	868,856	224	323	5.33	1.7	13.139.45	24	844.4	1.196
7,496.29	320,090	123	217	5.08	2.3	6,015.56	21	347.0	671
7,675.47	369,520	119	259	5.37	2.1	13,192.95	13	616.7	853

STATEMENT

Statistics Relating to the Supply of Electric Energy to Consumers For Domestic Service, for Commercial Light Service

Group II—TOWNS

Municipality	System	Population	Domestic service					
			Revenue	Consumption	Number of consumers	Average monthly consumption	Average monthly bill	Net cost per kw-hr.
			$ c.	kw-hr.		kw-hr.	$ c.	cents
Forest Hill	Nia.	11,117	194,446.50	14,665,887	2,988	409	5.42	1.3
Georgetown	Nia.	2,345	17,938.54	1,064,212	735	121	2.03	1.7
Goderich	Nia.	4,407	29,991.07	1,836,975	1,258	122	1.99	1.6
Gravenhurst	G.B.	2,135	9,999.56	799,429	555	120	1.50	1.3
Hanover	G.B.	3,215	19,974.65	1,117,606	773	120	2.15	1.8
Hespeler	Nia.	2,789	14,813.84	818,337	758	90	1.63	1.8
Humberstone	Nia.	2,738	10,680.15	519,477	639	68	1.39	2.1
Huntsville	G.B.	2,770	13,158.64	1,165,996	659	147	1.66	1.1
Ingersoll	Nia.	5,177	30,011.79	2,259,700	1,400	135	1.79	1.3
Kincardine	G.B.	2,464	15,935.33	600,141	672	74	1.98	2.7
Kingsville	Nia.	2,359	14,178.16	914,207	620	123	1.91	1.6
Leamington	Nia.	5,630	27,166.39	1,893,494	1,480	107	1.53	1.4
Lindsay	E.O.	7,138	41,893.05	2,984,979	1,986	125	1.76	1.4
Listowel	Nia.	2,773	16,013.71	1,084,585	754	120	1.77	1.5
Long Branch	Nia.	4,140	27,473.19	1,773,374	1,321	112	1.73	1.5
Meaford	G.B.	2,811	13,470.10	615,131	686	75	1.64	2.2
Merritton	Nia.	2,656	13,140.02	979,621	707	115	1.55	1.3
Midland	G.B.	6,669	37,212.45	2,405,544	1,540	130	2.01	1.5
Mimico	Nia.	7,012	55,771.20	4,357,320	1,870	194	2.49	1.3
Napanee	E.O.	3,148	23,406.30	1,542,157	805	160	2.42	1.5
New Toronto	Nia.	7,140	37,247.85	2,672,660	1,745	128	1.77	1.4
Orangeville	G.B.	2,660	15,420.02	863,165	715	101	1.80	1.8
Paris	Nia.	4,369	22,510.28	1,733,100	1,165	124	1.61	1.3
Penetanguishene	G.B.	4,094	12,037.33	591,348	662	74	1.52	2.0
Perth	E.O.	4,174	24,520.16	1,764,166	1,025	156	1.99	1.4
Petrolia	Nia.	2,747	12,145.11	661,506	760	73	1.33	1.8
Picton	E.O.	3,439	21,315.14	1,364,905	1,008	113	1.76	1.6
Port Colborne	Nia.	6,503	30,157.84	1,606,150	1,492	90	1.68	1.9
Port Hope	E.O.	4,724	25,488.75	1,851,677	1,338	115	1.59	1.3
Prescott	E.O.	2,925	17,332.32	1,330,668	725	153	1.99	1.3
Preston	Nia.	6,422	31,794.80	2,323,616	1,526	127	1.74	1.4
Riverside	Nia.	5,090	37,741.62	1,806,667	1,342	112	2.34	2.1
St. Marys	Nia.	4,033	27,377.56	1,744,710	1,025	142	2.23	1.6
Simcoe	Nia.	6,052	25,954.71	1,649,810	1,526	90	1.42	1.6
Smiths Falls	E.O.	7,672	44,962.72	3,529,069	1,815	162	2.06	1.3
Strathroy	Nia.	2,917	20,285.22	1,659,860	830	166	2.03	1.2
Swansea	Nia.	5,831	71,445.82	4,922,271	1,855	221	3.21	1.4
Tecumseh	Nia.	2,237	12,646.47	467,935	579	67	1.82	2.7
Thorold	Nia.	5,001	19,030.70	1,379,889	1,169	98	1.36	1.4
Tillsonburg	Nia.	3,945	18,775.86	1,203,521	1,170	86	1.34	1.6
Trenton	E.O.	6,833	31,247.69	2,028,948	1,496	113	1.74	1.5
Walkerton	G.B.	2,463	15,338.49	963,844	621	129	2.06	1.6
Wallaceburg	Nia.	4,715	19,231.93	1,128,278	1,132	83	1.41	1.7
Waterloo	Nia.	8,524	59,606.94	5,807,350	2,036	238	2.44	1.0
Weston	Nia.	5,099	47,014.71	4,789,629	1,365	292	2.87	1.0
Whitby	E.O.	3,724	24,311.57	1,690,006	908	155	2.23	1.4
Wingham	G.B.	2,123	12,102.13	622,278	560	93	1.80	1.9

"D"—Continued

in Ontario Municipalities Served by the Commission and for Power Service during the year 1939

Population, 2,000 or more

Commercial Light service						Power service			Tota number of consumers
Revenue	Consumption	Number of consumers	Average monthly consumption	Average monthly bill	Net cost per kw-hr.	Revenue	Number of consumers	Average monthly horse-power	
$ c.	kw-hr.		kw-hr.	$ c.	cents	$ c.			
25,339.30	1,538,090	228	562	9.26	1.6	2,950.63	21	161.0	3,237
7,627.30	435,804	123	295	5.17	1.7	26,453.64	25	1,270.7	883
16,356.05	751,312	248	252	5.50	2.2	13,507.47	20	670.0	1,526
8,082.09	593,303	131	377	5.14	1.4	11,852.10	14	578.6	700
8,233.93	401,268	137	244	5.01	2.1	19,038.36	23	856.8	933
4,983.93	275,493	100	230	4.15	1.8	43,842.31	27	1,977.8	885
3,094.09	204,645	79	216	3.26	1.5	4,312.65	8	204.5	726
10,519.68	669,451	146	382	6.00	1.6	14,185.12	13	874.2	818
16,968.52	1,158,095	234	412	6.04	1.5	28,879.73	45	1,716.1	1,679
9,025.96	278,591	119	195	6.32	3.2	11,924.22	17	504.6	808
7,719.47	448,016	150	249	4.29	1.7	4,798.73	17	225.9	787
17,941.48	1,218,873	269	378	5.56	1.5	22,009.66	32	1,263.5	1,781
26,958.45	1,352,676	336	335	6.68	2.0	31,313.76	74	1,791.3	2,396
11,368.89	643,998	158	340	6.00	1.8	12,826.27	23	709.8	935
6,300.81	417,024	94	369	5.58	1.5	2,338.94	5	109.8	1,420
7,945.83	367,954	143	214	4.63	2.2	6,022.32	18	352.8	847
3,003.96	207,976	66	262	3.79	1.4	116,890.35	15	5,863.9	788
17,381.86	1,054,201	205	429	7.07	1.6	48,885.44	50	3,281.9	1,795
11,066.92	761,026	152	417	6.07	1.5	11,440.71	19	506.9	2,041
15,038.02	726,691	203	298	6.17	2.1	9,958.05	28	562.7	1,036
17,359.11	1,270,896	212	500	6.82	1.3	148,467.78	31	6,949.0	1,988
10,416.16	532,801	147	302	5.90	2.0	6,378.89	23	378.3	885
8,283.65	612,840	192	266	3.60	1.4	14,629.41	24	930.3	1,381
6,703.71	308,089	107	240	5.22	2.2	18,571.02	24	765.4	793
15,108.64	861,552	198	361	6.33	1.8	15,325.34	26	852.7	1,249
7,884.49	357,546	181	165	3.63	2.2	23,196.43	68	882.1	1,009
16,028.97	940,763	196	400	6.82	1.7	5,239.98	29	390.2	1,233
17,241.82	1,082,422	249	362	5.77	1.6	22,680.39	24	1,058.0	1,765
12,635.83	703,156	205	286	5.14	1.8	28,159.38	37	1,528.7	1,580
10,241.08	698,148	170	342	5.02	1.5	5,120.71	21	357.5	916
19,482.98	1,115,747	227	410	7.15	1.7	43,264.52	46	2,597.9	1,799
4,590.50	221,799	55	336	6.95	2.1	5,833.50	8	224.5	1,405
10,777.40	526,549	170	258	5.28	2.0	22,657.54	40	964.1	1,235
30,085.80	2,239,654	375	498	6.69	1.3	28,669.71	41	1,420.3	1,942
16,839.47	1,000,323	279	299	5.03	1.7	21,467.45	44	1,115.0	2,138
12,142.22	713,989	180	330	5.62	1.7	11,554.93	29	753.1	1,039
7,662.27	434,115	84	431	7.60	1.8	16,082.84	13	723.8	1,952
4,367.60	176,296	53	277	6.87	2.5	1,893.55	3	97.3	635
7,517.17	613,989	162	316	3.87	1.2	39,932.79	17	1,987.0	1,348
17,545.74	1,263,322	261	403	5.60	1.4	11,413.96	35	687.8	1,466
19,932.05	987,485	264	312	6.29	2.0	58,900.73	51	2,894.5	1,811
9,836.96	473,732	139	284	5.90	2.1	7,168.43	17	268.3	777
12,712.65	708,772	251	235	4.22	1.8	57,646.25	38	2,300.1	1,421
25,685.59	1,903,981	260	610	8.23	1.3	37,004.26	71	2,184.6	2,367
11,041.59	864,409	179	402	5.14	1.3	44,332.26	29	2,376.7	1,573
13,106.03	718,641	166	361	6.58	1.8	14,217.99	23	629.3	1,097
8,021.17	355,942	150	198	4.56	2.3	9,630.55	25	427.4	735

STATEMENT

Statistics Relating to the Supply of Electric Energy to Consumers For Domestic Service, for Commercial Light Service

Group III—SMALL TOWNS (less than 2,000 population),

NOTE—The power used in the smaller places and rural districts is, and possibly must always be, a relatively small proportion of the power distributed by the Commission. Thus, the power used by the small municipalities in the following group, which includes small towns, villages and certain suburban areas in townships, is less than 10 per cent of the power distributed by the Commission to Ontario municipalities. This relatively small proportion of the total power,

Municipality	System	Population	Domestic service					
			Revenue	Consumption	Number of consumers	Average monthly consumption	Average monthly bill	Net cost per kw-hr.
			$ c.	kw-hr.		kw-hr.	$ c.	cents
Acton	Nia.	1,869	10,990.19	808,498	510	132	1.80	1.4
Agincourt	Nia.	P.V.	4,842.83	293,412	154	159	2.62	1.7
Ailsa Craig	Nia.	483	2,419.50	120,766	142	71	1.42	2.0
Alexandria	E.O.	1,971	7,335.22	195,097	363	45	1.68	3.8
Alliston	G.B.	1,405	9,905.36	402,090	370	91	2.23	2.5
Alvinston	Nia.	650	3,524.01	68,270	168	34	1.75	5.2
Ancaster Twp.	Nia.	....	11,135.51	663,301	324	170	2.87	1.7
Apple Hill	E.O.	P.V.	1,273.82	28,506	56	42	1.90	4.5
Arkona	Nia.	397	2,712.22	64,064	103	52	2.19	4.2
Arthur	G.B.	1,017	5,353.71	134,096	214	52	2.08	4.0
Athens	E.O.	670	3,157.54	83,890	172	41	1.53	3.8
Ayr	Nia.	730	5,469.70	296,102	225	110	2.03	1.8
Baden	Nia.	P.V.	3,454.51	255,814	150	142	1.92	1.4
Bath	E.O.	343	1,901.19	46,810	50	78	3.17	4.1
Beachville	Nia.	P.V.	3,505.23	191,442	163	98	1.79	1.8
Beamsville	Nia.	1,161	9,505.80	702,439	349	168	2.27	1.4
Beaverton	G.B.	955	6,069.35	334,512	328	85	1.54	1.8
Beeton	G.B.	571	3,522.56	86,570	133	54	2.21	4.1
Belle River	Nia.	814	4,462.41	175,730	244	60	1.52	2.5
Blenheim	Nia.	1,758	8,934.25	516,340	557	75	1.29	1.7
Bloomfield	E.O.	653	3,241.21	129,943	170	64	1.59	2.5
Blyth	Nia.	656	3,396.76	124,741	176	58	1.61	2.7
Bolton	Nia.	600	4,113.76	218,756	178	102	1.93	1.9
Bothwell	Nia.	694	2,746.74	155,215	189	68	1.21	1.8
Bradford	G.B.	989	6,216.75	200,056	243	69	2.13	3.1
Brantford Twp.	Nia.	....	22,718.14	1,364,404	970	117	1.95	1.7
Brechin	G.B.	P.V.	1,247.35	22,391	33	57	3.15	5.6
Bridgeport	Nia.	P.V.	4,850.10	195,600	183	89	2.21	2.5
Brigden	Nia.	P.V.	2,316.18	70,898	117	50	1.65	3.3
Brighton	E.O.	1,454	9,203.39	284,222	511	46	1.50	3.2
Brussels	Nia.	773	4,509.68	158,903	240	55	1.57	2.8
Burford	Nia.	P.V.	4,456.75	330,587	196	141	1.89	1.3
Burgessville	Nia.	P.V.	1,647.51	49,159	56	73	2.45	3.4
Caledonia	Nia.	1,425	6,679.25	312,209	406	64	1.37	2.1
Campbellville	Nia.	P.V.	1,681.59	45,681	51	75	2.75	3.7
Cannington	G.B.	756	5,321.50	219,311	250	73	1.77	2.4
Capreol	N.O.P.	1,680	9,684.77	246,256	307	67	2.63	3.9
Cardinal	E.O.	1,556	7,276.09	441,432	371	99	1.63	1.6
Cayuga	Nia.	682	3,811.30	121,000	171	59	1.86	3.1
Chatsworth	G.B.	337	1.868.85	66.865	87	64	1.79	2.8

"D"—Continued

in Ontario Municipalities Served by the Commission and for Power Service during the year 1939

VILLAGES AND SUBURBAN AREAS

however, exerts upon the economic life of the Province a most beneficial influence. It should further be appreciated that about 35 per cent of these municipalities obtain their power. not from Niagara, but from relatively small water-power developments throughout the Province. The net cost per kilowatt-hour given in the table is the cost inclusive of all charges. Consult also introduction to Statement "D", page 328.

Commercial Light service						Power service			
Revenue	Consumption	Number of con-sumers	Average monthly consumption	Average monthly bill	Net cost per kw-hr.	Revenue	Number of con-sumers	Average monthly horse-power	Total number of con-sumers
$ c.	kw-hr.		kw-hr.	$ c.	cents	$ c.			
4,871.41	266,757	89	250	4.56	1.8	16,192.77	16	684.0	615
1,253.62	60,406	26	194	4.02	2.1	972.14	2	55.3	182
1,381.74	56,005	35	133	3.29	2.5	925.47	2	40.1	179
5,369.13	121,299	115	88	3.89	4.4	3,074.00	12	106.8	490
6,896.12	227,055	109	174	5.27	3.0	3,145.58	14	155.6	493
2,394.00	62,897	53	99	3.76	3.8	526.70	2	17.5	223
3,200.32	180,493	36	417	7.40	1.8	868.24	6	40.6	366
877.24	26,540	24	92	3.05	3.3	416.74	2	25.5	82
1,694.67	42,380	36	98	3.92	4.0	56.27	1	3.0	140
4,856.10	125,168	87	120	4.65	3.9	1,130.67	6	75.7	307
1,548.70	37,070	45	69	2.87	4.2	916.67	1	33.7	218
1,708.80	73,675	41	150	3.47	2.3	528.62	5	24.6	271
2,102.12	104,521	39	223	4.49	2.0	5,437.00	2	242.2	191
632.28	11,116	10	93	5.27	5.7	....	......	....	60
731.95	34,784	22	131	2.77	2.1	10,388.06	4	440.1	189
4,912.50	216,357	73	250	5.67	2.3	2,007.22	6	112.9	428
2,692.69	155,119	67	193	3.35	1.7	1,350.84	9	76.6	404
2,056.38	45,055	34	110	5.04	4.6	995.95	4	60.6	171
2,446.87	105,411	44	200	4.63	2.3	1.219.74	2	35.6	290
7,801.22	471,358	133	295	4.89	1.7	4,913.18	14	210.4	704
1,716.21	57,164	43	111	3.33	3.0	1,025.30	7	37.2	220
1,956.94	66,630	47	118	3.47	2.9	418.21	3	26.8	226
1,726.74	60,983	48	106	3.00	2.8	2,162.39	10	106.7	236
1,669.08	86,865	54	134	2.58	1.9	693.78	7	75.8	250
3,985.33	111,769	68	137	4.88	3.6	2,544.63	8	125.6	319
4,266.29	292,026	53	459	6.71	1.5	3,432.69	8	164.7	1.031
1,021.65	25,730	22	97	3.87	4.0	821.96	4	38.5	59
798.07	30,407	19	133	3.50	2.6	144.10	1	5.0	203
1,960.77	60,953	39	130	4.19	3.2	654.56	4	21.4	160
4,255.87	174,413	95	153	3.73	2.4	3,234.53	9	176.1	615
3,014.64	99,372	69	120	3.64	3.0	713.92	2	26.7	311
1,201.70	69,655	29	200	3.45	1.7	605.97	1	23.6	226
794.22	22,183	18	103	3.68	3.6	240.83	2	15.2	76
5,200.34	333,365	102	272	4.25	1.6	1,740.26	8	76.5	516
731.66	18,853	13	121	4.69	3.9	....	......	....	64
2,272.92	70,554	67	88	2.83	3.2	512.08	10	28.4	327
3,987.81	132,349	49	225	6.78	3.0	740.27	1	25.0	357
2,405.82	120,875	61	165	3.29	2.0	522.97	3	18.7	435
3,866.43	120,216	62	162	5.20	3.2	922.61	7	37.0	240
1,415.79	53,810	35	128	3.37	2.6	....	......	....	122

STATEMENT

Statistics Relating to the Supply of Electric Energy to Consumers For Domestic Service, for Commercial Light Service

Group III—SMALL TOWNS (less than 2,000 population),

Municipality	System	Population	Domestic service					
			Revenue	Consumption	Number of consumers	Average monthly consumption	Average monthly bill	Net cost per kw-hr.
			$ c.	kw-hr.		kw-hr.	$ c.	cents
Chesley	G.B.	1,743	8,790.72	503,409	432	97	1.69	1.7
Chesterville	E.O.	1,083	4,548.00	308,862	249	103	1.52	1.5
Chippawa	Nia.	1,140	7,714.04	594,592	335	148	1.92	1.3
Clifford	Nia.	452	2,553.97	74,208	122	50	1.74	3.4
Clinton	Nia.	1,888	12,430.52	756,939	575	110	1.79	1.6
Cobden	E.O.	627	2,127.91	53,876	117	38	1.52	3.9
Colborne	E.O.	955	5,375.34	247,674	257	80	1.74	2.2
Coldwater	G.B.	612	3,550.73	190,289	160	99	1.85	1.9
Comber	Nia.	P.V.	2,029.18	79,493	105	63	1.61	2.6
Cookstown	G.B.	P.V.	2,254.81	52,910	105	42	1.79	4.3
Cottam	Nia.	P.V.	2,342.16	83,916	111	63	1.76	2.8
Courtright	Nia.	329	1,718.52	32,479	72	38	1.99	5.3
Creemore	G.B.	615	2,910.21	105,310	161	55	1.51	2.8
Dashwood	Nia.	P.V.	1,672.59	60,224	83	60	1.68	2.8
Delaware	Nia.	P.V.	1,812.37	103,650	61	142	2.48	1.7
Deseronto	E.O.	1,300	5,654.28	195,681	308	53	1.53	2.9
Dorchester	Nia.	P.V.	2,581.81	131,753	141	78	1.53	2.0
Drayton	Nia.	527	3,434.83	132,256	167	66	1.71	2.6
Dresden	Nia.	1,572	6,361.53	330,277	437	63	1.21	1.9
Drumbo	Nia.	P.V.	2,313.04	106,728	90	99	2.14	2.2
Dublin	Nia.	P.V.	1,436.66	39,896	56	59	2.14	3.6
Dundalk	G.B.	700	3,176.45	148,470	194	64	1.36	2.1
Durham	G.B.	1,864	6,979.40	374,599	448	70	1.30	1.9
Dutton	Nia.	793	3,119.40	190,990	222	72	1.17	1.6
East York Twp	Nia.	....	192,960.94	12,227,125	9,729	104	1.65	1.6
Elmvale	G.B.	P.V.	3,641.26	171,500	174	82	1.74	2.1
Elmwood	G.B.	P.V.	1,245.14	26,060	65	33	1.59	4.8
Elora	Nia.	1,149	7,465.96	382,905	331	96	1.87	1.9
Embro	Nia.	423	3,097.16	168,783	114	123	2.26	1.8
Erieau	Nia.	295	3,988.67	143,754	195	61	1.70	2.8
Erie Beach	Nia.	....	1,784.35	40,865	86	40	1.73	4.4
Essex	Nia.	1,854	7,984.64	453,280	478	79	1.39	1.8
Etobicoke Twp	Nia.	....	146,226.81	12,273,876	4,339	235	2.80	1.2
Exeter	Nia.	1,649	11,169.75	765,121	475	134	1.96	1.5
Finch	E.O.	337	2,205.80	120,916	93	108	1.98	1.8
Flesherton	G.B.	455	2,561.14	77,390	137	47	1.56	3.3
Fonthill	Nia.	867	5,135.52	208,603	236	74	1.81	2.5
Forest	Nia.	1,520	11,957.16	626,545	466	112	2.14	1.9
Glencoe	Nia.	726	5,017.33	203,847	220	77	1.93	2.5
Grand Valley	G.B.	605	3,433.97	93,494	175	45	1.64	3.7

"D"—Continued

in Ontario Municipalities Served by the Commission and for Power Service during the year 1939

VILLAGES AND SUBURBAN AREAS

Commercial Light service						Power service			
Revenue	Consumption	Number of consumers	Average monthly consumption	Average monthly bill	Net cost per kw-hr.	Revenue	Number of consumers	Average monthly horse-power	Total number of consumers
$ c.	kw-hr.		kw-hr.	$ c.	cents	$ c.			
5,411.68	295,790	102	242	4.42	1.8	6,722.53	21	367.0	555
3,604.46	162,380	76	178	3.95	2.2	1,909.23	3	85.5	328
2,316.26	142,715	49	243	3.94	1.6	1,215.31	2	41.7	386
2,182.03	75,144	38	164	4.78	2.9	511.38	1	17.9	161
8,024.21	353,873	133	222	5.03	2.3	4,040.57	16	190.9	724
2,534.74	61,087	53	96	3.99	4.1	334.36	1	8.3	171
3,183.90	120,426	77	130	3.45	2.6	785.44	4	47.0	338
1,528.54	54,368	49	92	2.60	2.8	5,997.63	3	265.5	212
1,976.44	68,517	47	121	3.50	2.9	1,785.36	2	66.7	154
1,485.00	37,592	32	98	3.87	4.0	861.74	3	61.6	140
1,417.41	77,831	29	224	4.08	1.8	280.70	1	15.0	141
1,123.94	28,747	25	96	3.75	3.9	989.57	1	12.5	98
1,987.61	69,505	60	97	2.76	2.9	1,012.35	4	72.9	225
1,156.66	31,183	27	96	3.57	3.7	738.26	2	26.3	112
805.48	27,160	17	133	3.95	3.0	....	......	....	78
2,092.35	57,661	65	74	2.68	3.6	1,910.91	7	69.1	380
942.56	36,722	27	113	2.91	2.6	706.59	2	38.4	170
1,960.72	59,407	65	76	2.51	3.3	1,274.16	4	65.4	236
6,003.98	332,245	127	218	3.93	1.8	3,445.30	11	227.9	575
912.01	34,203	27	106	2.81	2.7	640.20	1	25.3	118
805.84	21,078	22	80	3.05	3.8	1,287.99	2	52.2	80
2,860.62	103,701	73	118	3.26	2.7	2,861.53	6	156.9	273
5,121.51	247,459	106	194	4.03	2.1	3,949.96	14	224.8	568
2,338.36	123,090	64	160	3.04	1.9	2,903.15	10	164.3	296
30,298.00	1,852,101	428	360	5.90	1.6	37,564.43	44	1,675.3	10,201
1,738.24	77,884	50	130	2.90	2.2	2,589.58	8	122.9	232
670.34	15,174	23	55	2.43	4.4	1,095.54	1	39.4	89
4,105.50	168,465	72	195	4.81	2.4	2,884.29	3	148.3	406
1,335.25	39,659	38	87	2.93	3.4	231.30	2	14.8	154
1,300.02	44,377	16	231	6.77	2.9	426.97	2	18.4	213
380.50	10,955	3	304	10.57	3.5	....	......	....	89
6,790.64	413,290	119	289	4.76	1.6	6,109.85	16	326.4	613
23,166.79	1,559,000	241	539	8.01	1.5	27,836.78	35	1,313.8	4,615
6,151.82	300,298	131	191	3.91	2.0	3,307.61	13	225.7	619
1,636.94	56,464	37	127	3.69	2.9	335.67	1	9.2	131
1,925.25	66,800	51	109	3.15	2.9	544.91	2	28.5	190
1,762.50	77,360	33	195	4.45	2.3	504.23	3	16.8	272
6,181.06	236,829	124	159	4.15	2.6	4,596.50	22	222.0	612
3,952.16	142,765	81	147	4.07	2.8	3,263.94	9	102.5	310
2,162.78	58,408	54	90	3.34	3.7	1,439.01	4	75.1	233

STATEMENT

Statistics Relating to the Supply of Electric Energy to Consumers For Domestic Service, for Commercial Light Service

Group III—SMALL TOWNS (less than 2,000 population),

Municipality	System	Population	Domestic service					
			Revenue	Consumption	Number of consumers	Average monthly consumption	Average monthly bill	New cost per kw-hr.
			$ c.	kw-hr.		kw-hr.	$ c.	cents
Granton	Nia.	P.V.	1,869.76	96,978	89	91	1.75	1.9
Hagersville	Nia.	1,355	6,043.26	316,006	372	71	1.35	1.9
Harriston	Nia.	1,269	7,187.62	479,431	365	109	1.64	1.5
Harrow	Nia.	1,032	9,057.95	605,247	299	169	2.52	1.5
Hastings	E.O.	757	3,758.61	129,879	213	51	1.47	2.9
Havelock	E.O.	1,147	5,288.26	190,692	291	55	1.51	2.8
Hensall	Nia.	685	4,099.63	166,090	194	71	1.76	2.5
Highgate	Nia.	362	1,624.48	60,940	101	50	1.34	2.7
Holstein	G.B.	P.V.	956.80	15,997	50	27	1.59	6.0
Jarvis	Nia.	519	2,705.08	96,194	143	56	1.58	2.8
Kemptville	E.O.	1,218	7,103.67	391,378	342	95	1.73	1.8
Kirkfield	G.B.	P.V.	956.03	15,617	30	43	2.66	6.1
Lakefield	E.O.	1,308	5,925.37	249,004	327	63	1.51	2.4
Lambeth	Nia.	P.V.	3,087.56	175,087	127	115	2.03	1.8
Lanark	E.O.	723	2,693.77	83,245	158	44	1.42	3.2
Lancaster	E.O.	511	2,071.61	45,710	93	41	1.86	4.5
La Salle	Nia.	882	6,399.24	346,702	221	131	2.41	1.8
London Twp.	Nia.	....	12,272.90	1,028,026	413	207	2.48	1.2
Lucan	Nia.	610	4,311.08	209,872	184	95	1.95	2.1
Lucknow	G.B.	1,034	6,364.73	159,942	247	54	2.15	4.0
Lynden	Nia.	P.V.	2,093.19	71,076	94	63	1.86	2.9
Madoc	E.O.	1,108	4,873.58	172,566	287	50	1.42	2.8
Markdale	G.B.	781	3,787.61	154,150	220	58	1.43	2.5
Markham	Nia.	1,153	7,323.65	408,463	313	109	1.95	1.8
Marmora	E.O.	995	3,697.68	114,665	228	42	1.35	3.2
Martintown	E.O.	P.V.	684.89	24,225	46	44	1.24	2.8
Maxville	E.O.	758	3,562.39	97,549	152	53	1.95	3.7
Merlin	Nia.	P.V.	2,283.67	75,662	116	54	1.64	3.0
Millbrook	E.O.	737	3,720.54	110,409	178	55	1.74	3.2
Mildmay	G.B.	754	3,410.06	165,358	169	82	1.68	2.1
Milton	Nia.	1,848	13,079.35	717,642	518	115	2.10	1.8
Milverton	Nia.	1,010	4,902.24	344,391	252	114	1.62	1.4
Mitchell	Nia.	1,615	11,847.47	800,056	489	136	2.02	1.5
Moorefield	Nia.	P.V.	1,045.14	23,730	57	35	1.53	4.4
Morrisburg	E.O.	1,853	8,542.20	478,759	428	93	1.66	1.8
Mt. Brydges	Nia.	P.V.	2,780.89	150,639	143	88	1.62	1.8
Mt. Forest	G.B.	1,840	8,967.74	444,205	489	76	1.53	2.0
Neustadt	G.B.	455	2,104.67	29,451	98	25	1.79	7.1
Newbury	Nia.	288	1,234.83	32,561	69	39	1.49	3.8
Newcastle	E.O.	700	5,567.77	193,114	201	80	2.31	2.9

"D"—Continued

in Ontario Municipalities Served by the Commission and for Power Service during the year 1939

VILLAGES AND SUBURBAN AREAS

Commercial Light service						Power service			Total number of con-sumers
Revenue	Consumption	Number of con-sumers	Average monthly consumption	Average monthly bill	Net cost per kw-hr.	Revenue	Number of con-sumers	Average monthly horse-power	
$ c.	kw-hr.		kw-hr.	$ c.	cents	$ c.			
1,013.83	39,839	31	107	2.72	2.5	....	......	....	120
6,014.68	333,820	114	244	4.40	1.8	11,790.19	13	598.7	499
4,738.48	212,595	102	174	3.87	2.2	5,846.95	14	269.3	481
5,009.00	236,001	83	237	5.11	2.1	2,761.98	6	136.4	388
2,197 22	59,299	53	93	3.45	3.7	244.49	4	17.1	270
2,944.33	66,966	58	96	4.23	4.4	2,260.06	3	87.9	352
2,712.51	96,550	58	139	3.90	2.8	3,264.82	14	149.4	266
899.31	30,720	35	73	2.14	2.9	1,043.46	5	60.4	141
642.09	12,800	22	48	2.43	5.0	134.12	1	7.5	73
1,967.35	86,177	44	163	3.72	2.3	3,232.99	4	121.6	191
4,973.81	252,830	85	248	4.88	2.0	4,543.84	6	204.5	433
1,100.47	23,378	20	97	4.59	4.7	....	......	....	50
4,147 92	169,810	71	199	4.87	2.4	3,578.48	6	176.8	404
1,201.87	52,175	24	181	4.17	2.3	540.81	2	27.5	153
1,538.04	50,483	40	105	3.20	3.0	....	......	....	198
1,612.90	40,610	36	94	3.73	4.0	....	......	....	129
1,636.31	68,889	19	302	7.18	2.4	1,707.14	3	55.4	243
2,431.79	158,398	20	660	10.13	1.5	1,630.87	4	76.0	437
1,973.15	70,504	56	105	2.94	2.8	1,797.84	7	91.0	247
3,919.42	87,668	80	91	4.08	4.5	4,652.25	6	139.0	333
863.22	28,352	14	169	5.14	3.0	709.67	2	39.6	110
3,850.94	140,050	97	120	3.31	2.7	1,131.44	6	79.8	390
2,776.21	124,009	81	128	2.86	2.2	1,101.42	11	87.8	312
3,430.32	179,095	71	210	4.03	1.9	2,987.29	9	140.8	393
1,973.69	76,682	47	136	3.50	2.6	322.06	2	26.2	277
954.20	33,989	25	113	3.18	2.8	....	......	....	71
2,689.51	65,919	48	114	4.67	4.1	....	......	....	200
2,222.62	75,768	48	132	3.86	2.9	495.47	2	17.7	166
1,850.08	30,922	53	49	2.91	5.5	464.63	3	14.8	234
2,206.89	72,766	50	121	3.78	3.0	928.97	3	29.9	222
6,484.44	325,112	110	246	4.91	2.0	17,992.77	15	730.7	643
3,615.31	166,816	73	190	4.13	2.2	3,667.52	9	238.1	334
5,710.81	302,061	125	201	3.81	1.9	4,348.33	23	290.0	637
1,083.73	38,646	31	104	2.91	2.8	26.70	1	2.0	89
5.654.00	240,328	118	170	3.99	2.4	2,401.79	14	165.4	560
1,030.01	42,642	40	89	2.15	2.4	718.25	3	36.6	186
7,481 45	375,585	156	201	4.00	2.0	5,471.52	14	294.0	659
1,069.82	19,080	29	55	3.07	5.6	405.24	1	9.2	128
665 32	20,206	21	80	2.64	3.3	314 31	1	14 0	91
2,849 31	85,224	36	197	6.60	3.3	1.737 21	5	63 0	242

STATEMENT

Statistics Relating to the Supply of Electric Energy to Consumers For Domestic Service, for Commercial Light Service

Group III—SMALL TOWNS (less than 2,000 population),

Municipality	System	Population	Domestic service					
			Revenue	Consumption	Number of consumers	Average monthly consumption	Average monthly bill	Net cost per kw-hr.
			$ c.	kw-hr.		kw-hr.	$ c.	cents
New Hamburg	Nia.	1,458	9,562.95	573,521	368	130	2.17	1.7
Niagara-on-the-Lake	Nia.	1,670	13,701.77	1,157,355	524	184	2.18	1.2
Nipigon Twp.	T.B.	V.A.	3,462.47	163,655	195	70	1.48	2.0
North York Twp.	Nia.	....	155,939.24	8,806,657	4,711	155	2.77	1.7
Norwich	Nia.	1,365	8,958.87	629,150	384	137	1.94	1.4
Norwood	E.O.	710	4,453.57	154,170	235	55	1.58	2.9
Oil Springs	Nia.	514	1,595.96	83,541	93	75	1.43	1.9
Omemee	E.O.	553	2,510.99	94,537	165	48	1.27	2.7
Orono*	E.O.	P.V.	4,731.72	....	188	......	......	.....
Otterville	Nia.	P.V.	2,529.46	140,647	130	80	1.62	1.8
Paisley	G.B.	729	4,090.42	97,785	202	40	1.69	4.2
Palmerston	Nia.	1,406	9,801.95	767,003	392	163	2.08	1.3
Parkhill	Nia.	900	5,277.64	196,100	277	59	1.59	2.7
Plattsville	Nia.	P.V.	2,490.26	98,353	109	75	1.90	2.5
Point Edward	Nia.	1,177	5,842.74	255,686	305	70	1.60	2.3
Port Credit	Nia.	1,901	14,810.88	1,277,140	515	207	2.40	1.1
Port Dalhousie	Nia.	1,590	15,699.86	1,286,672	620	173	2.11	1.2
Port Dover	Nia.	1,705	8,789.84	448,567	632	59	1.16	2.0
Port Elgin	G.B.	1,321	9,523.92	531,958	448	99	1.77	1.8
Port McNicoll	G.B.	905	4,103.29	137,980	220	52	1.55	3.0
Port Perry	G.B.	1,128	7,447.92	295,916	340	73	1.83	2.5
Port Rowan	Nia.	556	3,084.17	94,690	136	58	1.89	3.3
Port Stanley	Nia.	737w †3,500s	13,025.42	769,314	697	92	1.56	1.7
Priceville	G.B.	P.V.	792.02	12,303	36	28	1.83	6.4
Princeton	Nia.	P.V.	2,425.10	112,228	87	107	2.32	2.2
Queenston	Nia.	P.V.	3,271.93	251,720	77	272	3.54	1.3
Richmond	E.O.	403	2,050.39	91,289	66	115	2.59	2.2
Richmond Hill	Nia.	1,317	8,538.59	575,850	367	130	1.94	1.5
Ridgetown	Nia.	1,958	8,710.57	561,188	568	82	1.28	1.6
Ripley	G.B.	442	3,242.20	66,094	120	46	2.25	4.9
Rockwood	Nia.	P.V.	3,846.70	196,800	162	101	1.98	2.0
Rodney	Nia.	695	3,370.91	175,096	244	60	1.15	1.9
Rosseau	G.B.	305	2,776.97	47,220	62	63	3.73	5.9
Russell	E.O.	P.V.	2,775.18	83,241	119	58	1.94	3.3
St. Clair Beach	Nia.	108	2,172.80	92,977	73	106	2.48	2.3
St. George	Nia.	P.V.	3,168.32	153,366	150	85	1.76	2.1
St. Jacobs	Nia.	P.V.	3,943.63	276,800	132	175	2.49	1.4
Scarboro Twp.	Nia.	....	112,683.60	6,835,504	5,029	113	1.86	1.6
Seaforth	Nia.	1,705	10,255.34	598,563	473	105	1.81	1.7
Shelburne	G.B.	1,043	5,633.39	220,006	301	61	1.56	2.6

*Thirteen months, operation.

†Summer resort—Population in August is about 3,500.

"D"—Continued

in Ontario Municipalities Served by the Commission and for Power Service during the year 1939

VILLAGES AND SUBURBAN AREAS

Commercial Light service						Power service			Total number of consumers
Revenue	Consumption	Number of consumers	Average monthly consumption	Average monthly bill	Net cost per kw-hr.	Revenue	Number of consumers	Average monthly horse-power	
$ c.	kw-hr.		kw-hr.	$ c.	cents	$ c.			
4,551.01	193,615	98	165	3.87	2.4	5,257.00	13	279.4	479
4,155.49	252,350	84	250	4.12	1.6	1,930.47	8	82.6	616
3,261.85	163,770	57	239	4.77	2.0	684.83	2	43.3	254
23,719.66	981,510	305	268	6.48	2.4	38,922.32	35	1,239.9	5,051
4,518.85	243,272	95	213	3.96	1.9	2,119.42	9	137.7	488
2,346.21	58,525	57	86	3.43	4.0	528.28	3	26.7	295
1,482.59	64,843	33	164	3.74	2.3	6,371.44	36	190.4	162
1,735.66	72,072	41	146	3.52	2.4	2,311.16	6	108.0	212
2,495.69	....	46	......	.....	.....	59.05	1	....	235
2,105.25	107,253	45	199	3.89	2.0	375.91	3	18.7	178
2,738.15	82,964	51	136	4.47	3.3	768.44	4	29.5	257
5,666.32	282,395	103	228	4.58	2.0	6,868.15	12	390.4	507
3,638.02	104,041	80	108	3.79	3.5	1,392.15	5	42.6	362
1,054.21	47,693	24	166	3.66	2.2	1,128.63	1	43.1	134
2,254.64	76,757	44	145	4.27	2.9	30,904.93	10	1,219.1	359
6,718.56	438,590	93	393	6.02	1.5	4,295.91	8	180.4	616
3,402.95	202,201	55	306	5.16	1.7	5,358.27	14	234.3	689
4,840.75	250,420	119	175	3.39	1.9	4,459.39	16	216.8	767
5,908.92	251,324	113	185	4.35	2.3	3,343.97	6	189.6	567
662.63	23,465	20	98	2.76	2.8	43.09	1	1.3	241
3,269.46	100,139	81	103	3.36	3.3	2,602.87	12	125.4	433
2,288.18	81,400	44	154	4.33	2.8	104.73	3	9.9	183
4,393.73	193,709	100	161	3.66	2.3	4,100.86	9	189.8	806
315.88	4,961	10	41	2.63	6.4	79.81	1	2.0	47
884.12	38,006	20	158	3.68	2.3	1,759.85	3	71.3	110
1,113.03	53,715	13	344	7.13	2.1	....	......	....	90
1,470.01	38,525	28	115	4.38	3.8	....	......	....	94
4,141.81	243,859	68	298	5.07	1.7	2,093.02	13	121.5	448
7,055.04	396,697	142	233	4.14	1.8	4,242.28	20	248.0	730
1,710.68	29,468	49	50	2.91	5.8	1,306.71	1	51.8	170
1,040.49	41,828	34	103	2.55	2.5	319.35	2	12.9	198
2,644.84	104,365	79	110	2.79	2.5	1,915.25	6	97.2	329
1,035.80	18,085	22	69	3.92	5.7	....	......	....	84
1,614.08	40,451	35	96	3.84	4.0	....	......	....	154
2,357.41	92,180	8	960	24.55	2.6	304.54	1	10.0	82
1,525.11	68,455	35	163	3.63	2.2	2,438.87	2	97.5	187
1,642.93	65,662	31	177	4.42	2.5	4,745.55	7	195.0	170
23,451.65	1,351,242	353	319	5.53	1.7	24,490.96	33	965.7	5,415
6,475.62	387,977	118	274	4.57	1.7	4,163.77	14	217.0	605
3,735.63	144,270	79	152	3.94	2.6	2,398.31	14	190.4	394

STATEMENT

Statistics Relating to the Supply of Electric Energy to Consumers For Domestic Service, for Commercial Light Service

Group III—SMALL TOWNS (less than 2,000 population),

Municipality	System	Population	Domestic service					
			Revenue	Consumption	Number of consumers	Average monthly consumption	Average monthly bill	Net cost per kw-hr.
			$ c.	kw-hr.		kw-hr.	$ c.	cents
Sioux Lookout	N.O.P.	1,901	3,716.76	66,214	524	32	1.77	5.6
Southampton	G.B.	1,441	10,079.86	477,683	502	79	1.67	2.1
Springfield	Nia.	377	1,828.88	63,178	108	49	1.41	2.9
Stamford Twp.	Nia.	....	57,418.11	4,760,771	1,895	209	2.52	1.2
Stayner	G.B.	1,043	4,811.51	242,757	271	75	1.48	2.0
Stirling	E.O.	960	5,036.86	335,537	289	97	1.45	1.5
Stouffville	Nia.	1,160	7,132.99	376,330	386	81	1.54	1.9
Streetsville	Nia.	700	4,655.51	242,260	188	107	2.06	1.9
Sunderland	G.B.	P.V.	2,712.02	75,190	116	54	1.95	3.6
Sutton	Nia.	852	8,400.59	312,070	434	60	1.61	2.7
Tara	G.B.	474	3,185.14	93,740	151	52	1.76	3.4
Tavistock	Nia.	1,063	7,458.62	511,584	292	146	2.13	1.5
Teeswater	G.B.	842	5,156.75	161,126	225	60	1.91	3.2
Thamesford	Nia.	P.V.	3,138.98	226,009	134	140	1.95	1.4
Thamesville	Nia.	833	3,651.80	192,560	236	68	1.29	1.9
Thedford	Nia.	595	3,148.65	76,643	150	43	1.75	4.1
Thorndale	Nia.	P.V.	1,734.04	52,132	71	61	2.04	3.3
Thornton	G.B.	P.V.	1,412.20	20,483	60	28	1.96	6.9
Tilbury	Nia.	1,980	6,518.04	401,360	457	73	1.19	1.6
Toronto Twp.	Nia.	....	68,504.83	4,914,460	2,397	171	2.38	1.4
Tottenham	G.B.	557	3,538.51	92,353	140	55	2.11	3.8
Trafalgar Twp. No. 1	Nia.	....	14,522.60	785,206	362	181	3.34	1.8
Trafalgar Twp. No. 2	Nia.	....	5,499.47	303,739	158	160	2.89	1.8
Tweed	E.O.	1,228	5,991.46	219,134	291	63	1.72	2.7
Uxbridge	G.B.	1,509	8,514.79	394,230	402	82	1.77	2.2
Victoria Harbor	G.B.	1,023	3,361.20	113,915	221	43	1.27	3.0
Wardsville	Nia.	236	1,373.34	37,831	56	56	2.04	3.6
Warkworth	E.O.	P.V.	2,177.11	59,094	137	36	1.32	3.7
Waterdown	Nia.	904	4,942.40	317,050	243	109	1.69	1.6
Waterford	Nia.	1,216	6,038.51	375,085	368	85	1.37	1.6
Watford	Nia.	964	6,890.76	365,520	286	107	2.01	1.9
Waubaushene	G.B.	P.V.	3,220.89	147,066	212	58	1.27	2.2
Wellesley	Nia.	P.V.	2,371.01	93,131	128	61	1.54	2.5
Wellington	E.O.	916	6,016.63	284,128	321	74	1.56	2.1
West Lorne	Nia.	837	3,074.88	147,239	214	57	1.20	2.1
Westport	E.O.	693	3,490.34	85,134	113	63	2.57	4.1
Wheatley	Nia.	760	4,076.09	159,925	228	58	1.49	2.5
Wiarton	G.B.	1,723	7,501.29	325,414	401	68	1.56	2.3
Williamsburg	E.O.	P.V.	1,989.98	253,228	101	209	1.64	0.8
Winchester	E.O.	1,040	6,208.00	407,018	289	117	1.79	1.5
Windermere	G.B.	118	2,688.39	44,445	61	61	3.67	6.0
Woodbridge	Nia.	830	6,869.14	422,506	289	122	1.98	1.6
Woodville	G.B.	421	2,166.95	87,796	115	64	1.57	2.5
Wyoming	Nia.	516	2,403.29	82,085	147	47	1.36	2.9
Zurich	Nia.	P.V.	3,126.35	111,377	135	69	1.93	2.8

"D"—Concluded

in Ontario Municipalities Served by the Commission and for Power Service during the year 1939

VILLAGES AND SUBURBAN AREAS

Commercial Light service						Power service			Total number of consumers
Revenue	Consumption	Number of consumers	Average monthly consumption	Average monthly bill	Net cost per kw-hr.	Revenue	Number of consumers	Average monthly horse-power	
$ c.	kw-hr.		kw-hr.	$ c.	cents	$ c.			
3,481.21	64,629	115	141	7.57	5.4	....	......	....	639
4,026.04	154,168	94	137	3.57	2.6	3,511.37	12	154.3	608
842.15	25,621	35	61	2.01	3.3	830.35	3	38.1	146
10,947.73	718,937	155	387	5.89	1.5	14,368.17	17	834.5	2.067
3,463.29	157,961	92	143	3.14	2.2	1,907.19	12	175.4	375
3,642.82	168,615	79	178	3.84	2.2	1,617.42	13	84.0	381
3,517.58	145,024	84	144	3.49	2.4	962.95	5	54.6	475
1,527.14	61,640	43	119	2.96	2.5	3,015.07	4	107.3	235
1,694.57	55,487	45	103	3.14	3.1	259.10	2	13.0	163
4,264.66	141,860	84	141	4.23	3.0	946.38	3	31.6	521
1,710.52	58,020	39	124	3.65	2.9	1,343.70	5	48.7	195
3,283.77	153,778	91	141	3.01	2.1	8,925.50	8	392.1	391
2,969.69	63,093	58	91	4.26	4.7	1,245.85	4	90.9	287
1,812.19	100,591	44	190	3.43	1.8	1,866.41	7	91.8	185
3,118.06	184,440	81	190	3.21	1.7	1,655.67	7	82.9	324
2,131.15	55,993	51	91	3.48	3.8	1,007.32	3	29.1	204
849.72	24,821	23	90	3.08	3.4	1,091.51	2	34.5	96
541.98	10,430	13	67	3.47	5.2	291.29	2	16.8	75
7,687.30	447,334	131	285	4.89	1.7	8,283.45	12	687.5	600
21,549.14	812,730	206	329	8.72	2.7	10,447.18	39	498.9	2,642
2,241.91	42,126	47	75	3.98	5.3	432.38	7	20.0	194
856.85	35,690	4	744	17.85	2.4	623.67	8	26.6	374
....	....	......	......	.....	...	....	......	....	158
4,821.78	126,344	98	107	4.10	3.8	3,303.66	15	141.1	404
4,483.76	134,649	99	113	3.77	3.3	1,197.18	10	78.3	511
959.36	38,580	22	146	3.63	2.5	105.71	1	3.0	244
1,105.23	25,691	26	82	3.54	4.3	43.26	1	3.0	83
1,264.75	49,580	44	94	2.40	2.6	....	......	....	181
1,780.99	109,774	38	241	3.91	1.6	1,278.19	7	90.3	288
2,734.28	219,040	79	231	2.88	1.2	5,409.76	12	371.5	459
3,155.54	134,200	79	142	3.33	2.4	3,401.13	5	125.1	370
743.87	35,800	23	130	2.70	2.1	731.53	4	22.3	239
1,546.83	45,248	49	77	2.63	3.4	1,207.13	4	56.0	181
2,410.29	95,483	66	121	3.04	2.5	1,301.28	5	43.4	392
1,985.14	90,106	48	156	3.45	2.2	1,604.92	5	89.5	267
3,193.76	80,416	51	131	5.22	4.0	....	......	....	164
3,386.36	123,712	71	145	3.97	2.7	2,666.32	5	112.9	304
8,143.65	298,699	117	213	5.80	2.7	4,448.10	17	184.4	535
3,880.91	219,117	53	345	6.10	1.8	127.44	1	11.2	155
3,921.09	196,787	83	198	3.94	2.0	1,435.73	3	64.6	375
1,126.15	26,448	13	170	7.22	4.3	129.66	1	7.5	75
2,216.57	108,566	51	177	3.62	2.0	7,501.93	7	372.3	347
1,104.77	35,338	33	89	2.79	3.1	630.66	2	33.8	150
1,486.50	46,790	48	81	2.58	3.2	351.32	3	20.9	198
2,664.64	70,396	46	128	4.83	3.8	....	......	....	181

STATEMENT "E"

Cost of Power to Municipalities and Rates to Consumers for Domestic Service—Commercial Light Service—Power Service in Ontario Urban Municipalities Served by The Hydro-Electric Power Commission For the Year 1939

In Statement "E" are presented the rate schedules applicable to consumers for domestic service, for commercial light service and for power service in each of the co-operating municipalities receiving service at cost through The Hydro-Electric Power Commission.* The cost per horsepower of the power supplied at wholesale by the Commission to the municipality, an important factor in determining rates to consumers, is also stated.

Cost of Power to Municipalities

The figures in the first column represent the total cost for the year of the power supplied by the Commission to the municipality, divided by the number of horsepower supplied. Details respecting these costs are given in the "Cost of Power" tables relating to the several systems, as presented in Section IX, and an explanation of the items making up the cost of power is given in the introduction to that Section.

Rates to Consumers

The Power Commission Act stipulates that "The rates chargeable by any municipal corporation generating or receiving and distributing electrical power or energy shall at all times be subject to the approval and control of the Commission,"† in accordance with the Act and in pursuance of its fundamental principle of providing service at cost, the Commission requires that accurate cost records be kept in each municipality, and exercises a continuous supervision over the rates charged to consumers.

At the commencement of its operations, the Commission introduced scientifically-designed rate schedules for each of the three main classes into which the electrical service is usually divided, namely: residential or domestic service, commercial light service, and power service, and the schedules in use during the past year are presented in the tables of this statement.

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*Except townships served as parts of rural power districts, for which consult latter part of Section III.

†R.S.O. 1937, Ch. 62, Sec. 89.

Domestic Service: Domestic rates apply to electrical service in residences, for all household purposes, including lighting, cooking and the operation of all domestic appliances.

During the past few years most of the urban municipal utilities have further simplified the domestic rate structure by abolishing the service charge, and making a suitable adjustment in the first consumption rate. Where the service charge is retained at 33 and 66 cents gross per month the charge of 33 cents per month per service is made when the permanently installed appliance load is under 2,000 watts, and the charge of 66 cents per month when 2,000 watts or more.

Commercial Light Service: Electrical energy used in stores, offices, churches, schools, public halls and institutions, hotels, public boarding-houses, and in all other premises for commercial purposes, including sign and display lighting, is billed at commercial lighting rates.

Water-Heater Service: For all consumers using continuous electric water heaters, low flat rates are available consisting of a fixed charge per month dependent on the capacity of the heating element and the cost of power to the municipal utility. Such heaters are so connected that the electrical energy they consume is not metered. For new installations the necessary equipment, including heater, thermostat, efficient insulation for water-storage tank, and wiring, is installed by a large number of municipal Hydro systems, without capital cost to the consumer.†

Power Service: The rate schedules given for power service in Statement "E" are those governing the supply of power at retail by each of the local municipal utilities. The Commission serves direct, certain large power consumers under special contracts, on behalf of the various systems of municipalities.

The rates for power service, as given in the tables, are the rates for 24-hour unrestricted power at secondary distribution voltage. For service at primary distribution voltage the rates are usually five per cent lower than those stated. In municipalities where load conditions and other circumstances permit, lower rates are available for "restricted power," discounts additional to those listed in the table being applicable.

The service charge relates to the connected load or to the maximum demand, as measured by a 10-minute average peak, where a demand meter is installed. The prompt payment discount of 10 per cent on the total monthly bill is given for settlement within 10 days.

Under the tabulation of rates for power service there is a column headed "Basis of rate 130 hours' monthly use of demand." This column shows approximately the net annual amount payable for a demand of one horsepower, assuming a monthly use of 130 hours, which includes 30 hours' use each month at the third energy rate. Broadly, the figures in this column serve to indicate approximately the relative cost of power service in the different municipalities listed.

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†In addition, the municipal Hydro systems supply booster water-heating equipment to furnish extra requirements beyond the capacity of the continuous heater; current for the booster heater is measured and charged for at the regular rates.

STATEMENT

Cost of Power to Municipalities and Rates to Consumers for for the Year 1939, in Urban Municipalities

Municipality C—City T—Town (pop. 2,000 or more)	Annual cost to the Commission on the works to serve electrical energy to municipality on a horse-power basis	Domestic service					
		Service charge per month*	First rate		All additional per kw-hr.	Minimum gross monthly bill	Prompt payment discount
			Number of kw-hrs. per month	Per kw-hr. per month			
	$ c	cents		cents	cents	$ c.	%
Acton	27.88	.....	60	2.5	1.0	0.83	10
Agincourt	30.94	.....	60	3.4	1.1	1.11	10
Ailsa Craig	39.17	.....	60	2.8	0.9	0.83	10
Alexandria T	50.52	.....	60	5.0	1.2	1.11	10
Alliston T	43.74	.....	40	5.3	1.3	1.39	10
Alvinston	51.19	.....	60	4.7	1.2	1.38	10
Amherstburg T	31.36	.....	60	3.4	0.9	0.83	10
Ancaster twp	25.89	.....	60	3.8	1.3	0.83	10
Apple Hill	43.11	.....	60	5.0	1.3	1.66	10
Arkona	59.12	.....	60	5.0	1.8	1.78	10
Arnprior T	29.96	.....	55	4.5	1.0	0.83	10
Arthur	61.71	33–66	40	4.8	1.5	1.67	10
Athens	42.11	33–66	50	4.5	1.5	1.11	10
Aylmer T	28.31	.....	60	2.3	0.8	0.83	10
Ayr	28.56	.....	60	3.4	1.1	1.11	10
Baden	27.63	.....	60	2.5	1.0	0.83	10
Barrie T	31.91	.....	60	2.7	1.0	0.83	10
Bath	48.01	33–66	40	6.0	1.5	2.78	10
Beachville	28.00	.....	60	3.1	1.1	0.83	10
Beamsville	23.96	.....	60	3.3	1.0	0.83	10
Beaverton	37.57	.....	60	2.8	1.0	1.11	10
Beeton	59.31	.....	40	5.5	1.8	1.67	10
Belle River	32.17	.....	60	3.6	1.0	1.11	10
Belleville C	25.98	.....	55	1.9	0.7	0.83	10
Blenheim T	30.32	.....	60	2.5	0.9	0.83	10
Bloomfield	42.75	.....	50	3.4	1.3	1.11	10
Blyth	42.02	.....	60	3.5	1.1	1.39	10
Bolton	31.58	.....	55	3.6	1.3	1.11	10
Bothwell T	36.98	.....	60	2.4	0.8	0.83	10
Bowmanville T	30.79	......	60	3.5	1.0	0.83	10
Bradford	46.93	.....	40	5.2	1.3	1.67	10
Brampton T	25.30	.....	60	2.3	1.0	0.83	10
Brantford C	23.85	.....	60	2.3	0.9	0.83	10
Brantford twp	27.15	.....	60	2.7	1.0	1.11	10
Brechin	46.90	.....	45	5.5	1.2	1.67	10
Bridgeport	29.14	.....	50	4.5	1.3	1.11	10
Brigden	46.54	.....	60	3.6	0.9	1.39	10
Brighton	31.93	.....	60	4.2	1.2	1.11	10
Brockville T	25.65	.....	60	1.8	0.8	0.83	10
Brussels	40.37	.....	50	3.8	1.1	1.39	10

*Where domestic service charge has not been abolished the charge is 33 cents per month per service when the permanently installed appliance load is under 2,000 watts and 66 cents per month when 2,000 watts or more.

"E"

Domestic Service—Commercial Light Service—Power Service Served by The Hydro-Electric Power Commission

Commercial Light service					Power service							
Service charge per 100 watts min. 1,000 watts	First 100 hrs. per month per kw-hr.	All additional per kw-hr.	Minimum gross monthly bill	Prompt payment discount	Basis of rate 130 hours' monthly use of demand	Service charge per h.p. per month	First 50 hrs. per month per kw-hr.	Second 50 hrs. per month per kw-hr.	All additional per kw-hr.	Minimum per h.p per month	Local discount	Prompt payment discount
cents	cents	cents	$ c.	%	$ c.	$ c.	cents	cents	cents	$ c.	%	%
5	1.8	0.5	0.83	10	21.00	1.00	1.8	1.1	0.33	......	10	10
5	3.0	0.6	1.11	10	23.00	1.00	2.1	1.4	0.33	......	10	10
5	2.2	0.6	0.83	10	24.00	1.00	2.3	1.5	0.33	......	10	10
5	4.2	0.8	1.66	10	38.00	1.00	4.0	2.6	0.33	......	......	10
5	4.3	1.0	1.39	10	30.00	1.00	2.8	1.8	0.33	......	......	10
5	4.3	1.0	1.38	10	53.00	1.00	6.2	4.1	0.33	......	......	10
5	2.5	0.6	0.83	10	24.00	1.00	2.3	1.5	0.33	......	10	10
5	3.0	0.7	0.83	10	28.00	1.00	2.5	1.6	0.33	......	......	10
5	5.0	1.0	1.66	10	50.00	1.00	5.7	3.8	0.33	......	......	10
5	5.0	1.0	1.78	10	53 00	1.00	6.2	4.1	0.33	......	......	10
5	4.5	1.0	0.83	10	23.00	1.00	2.1	1.4	0.33	......	10	10
5	5.0	1.0	1.67	10	40.00	1.00	4.3	2.8	0.33	......	......	10
5	4.5	1.0	1.11	10	42.00	1.00	4.6	3.0	0.33	......	......	10
5	1.9	0.5	0.83	10	20.00	1.00	1.6	1.0	0.33	......	10	10
5	2.5	0.7	1.11	10	32.00	1.00	3.1	2.0	0.33	......	......	10
5	2.2	0.7	0.83	10	20.00	1.00	1.6	1.0	0.33	......	10	10
5	2.1	0.8	0.83	10	18.00	1.00	1.9	1.2	0.33	......	25	10
5	6.0	1.0	2.78	10	35.00	1.00	3.5	2.3	0.33	......	......	10
5	2.6	0.6	0.83	10	21.00	1.00	1.8	1.1	0.33	......	10	10
5	3.0	0.6	0.83	10	25.00	1.00	2.0	1.3	0.33	......	......	10
5	2.0	0.8	1.11	10	24.00	1.00	2.3	1.5	0.33	......	10	10
5	5.5	1.0	1.67	10	35.00	1.00	3.5	2.3	0.33	......	......	10
5	2.7	0.6	1.11	10	32.00	1.00	3.1	2.0	0.33	......	......	10
4.5	1.6	0.35	0.83	10	15.00	1.00	1.3	0.8	0.33	......	25	10
5	2.0	0.6	0.83	10	24.00	1.00	2.3	1.5	0.33	......	10	10
5	3.0	1.0	1.11	10	38.00	1.00	4.0	2.6	0.33	......	......	10
5	3.4	1.0	1.39	10	45.00	1.00	4.9	3.3	0.33	......	......	10
5	3.2	1.0	1.11	10	26.00	1.00	2.2	1.4	0.33	......	......	10
5	2.0	0.5	0.83	10	27.00	1.00	2.3	1.5	0.33	......	......	10
5	2.6	0.7	0.83	10	22.00	1.00	1.9	1.3	0.33	......	10	10
5	4.4	1.0	1.67	10	30.00	1.00	2.8	1.8	0.33	......	......	10
5	1.8	0.6	0.83	10	17.00	1.00	1.7	1.1	0.33	......	25	10
†5	1.6	0.35	0.83	10	17.00	1.00	1.7	1.1	0.33	......	25	10
5	2.2	0.5	1.11	10	21.00	1.00	1.8	1.1	0.33	......	10	10
5	4.8	0.8	1.67	10	38.00	1.00	4.0	2.6	0.33	......	......	10
5	4.0	0.7	1.11	10	32.00	1.00	3.1	2.0	0.33	......	......	10
5	3.0	0.9	1.39	10	42.00	1.00	4.6	3.0	0.33	......	......	10
5	3.6	0.8	1.11	10	26.00	1.00	2.2	1.4	0.33	......	......	10
4.5	1.6	0.4	0.83	10	16.00	1.00	1.5	0.9	0.33	......	25	10
5	3.3	1.0	1.39	10	40.00	1.00	4.3	2.8	0.33	......	......	10

†Min. 500 watts.

STATEMENT

Cost of Power to Municipalities and Rates to Consumers for for the Year 1939, in Urban Municipalities

Municipality C—City T—Town (pop. 2,000 or more)	Annual cost to the Commission on the works to serve electrical energy to municipality on a horse-power basis	Domestic service					
		Service charge per month*	First rate		All additional per kw-hr.	Minimum gross monthly bill	Prompt payment discount
			Number of kw-hrs. per month	Per kw-hr. per month			
	$ c.	cents		cents	cents	$ c.	%
Burford	28.41	.....	60	2.9	0.9	0.83	10
Burgessville	44.27	.....	60	5.0	1.5	1.39	10
Caledonia	27.03	.....	60	2.5	0.8	0.83	10
Campbellville	44.60	.....	45	6.0	1.5	1.94	10
Cannington	39.15	.....	55	3.6	1.5	1.11	10
Cardinal	29.28	.....	55	2.5	1.1	1.11	10
Carleton Place T	26.88	.....	55	2.8	1.0	0.83	10
Cayuga	37.70	.....	60	3.8	1.1	1.39	10
Chatham C	25.56	.....	60	3.0	0.9	0.83	10
Chatsworth	38.91	.....	45	3.5	1.2	1.39	10
Chesley T	35.83	.....	55	2.9	1.1	1.11	10
Chesterville	32.57	.....	55	2.3	1.0	0.83	10
Chippawa	19.39	.....	60	2.8	0.9	1.11	10
Clifford	42.99	.....	55	4.0	1.2	1.39	10
Clinton T	30.71	.....	60	2.8	1.1	1.11	10
Cobden	51.23	.....	30	4.5	1.2	1.39	10
Cobourg T	31.41	.....	55	3.4	1.1	0.83	10
Colborne	32.62	.....	60	4.0	1.1	0.83	10
Coldwater	33.82	33–66	55	2.5	1.0	1.11	10
Collingwood T	34.83	.....	55	2.8	1.0	0.83	10
Comber	41.05	.....	60	3.6	0.9	1.11	10
Cookstown	43.88	.....	40	5.2	1.2	1.67	10
Cottam	36.14	.....	60	3.6	1.0	1.39	10
Courtright	52.95	.....	55	5.0	1.5	1.66	10
Creemore	44.91	.....	45	3.8	1.0	1.39	10
Dashwood	34.80	.....	60	4.2	1.0	1.11	10
Delaware	29.30	.....	60	3.5	1.2	1.11	10
Delhi	29.74	.....	60	3.6	1.0	0.83	10
Deseronto T	41.79	.....	50	4.8	1.2	0.83	10
Dorchester	31.63	.....	60	3.0	1.1	0.83	10
Drayton	45.15	.....	55	4.0	1.3	1.11	10
Dresden T	35.57	.....	60	2.6	0.8	0.83	10
Drumbo	31.89	.....	60	3.8	1.1	1.11	10
Dublin	42.43	.....	60	4.0	1.2	1.39	10
Dundalk	38.15	.....	55	3.0	1.0	1.11	10
Dundas T	22.76	.....	60	2.5	0.9	0.83	10
Dunnville T	22.66	.....	60	2.4	0.8	0.83	10
Durham T	38.74	.....	55	2.5	1.0	0.83	10
Dutton	30.99	.....	60	2.1	0.8	0.83	10
East York twp	27.53	.....	60	2.5	1.1	0.83	10
Elmira T	27.65	.....	60	3.4	1.0	0.83	10
Elmvale	38.55	.....	55	3.4	1.2	0.83	10
Elmwood	41.14	.....	45	4.5	1.0	1.39	10
Elora	30.51	.....	60	3.1	1.2	1.11	10
Embro	34.35	.....	60	3.4	1.2	1.39	10

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*Where domestic service charge has not been abolished the charge is 33 cents per month per service when the permanently installed appliance load is under 2,000 watts and 66 cents per month when 2,000 watts or more.

"E"—Continued
Domestic Service—Commercial Light Service—Power Service Served by The Hydro-Electric Power Commission

Commercial Light service					Power service							
Service charge per 100 watts min. 1,000 watts	First 100 hrs. per month per kw-hr.	All additional per kw-hr.	Minimum gross monthly bill	Prompt payment discount	Basis of rate 130 hours' monthly use of demand	Service charge per h.p. per month	First 50 hrs. per month per kw-hr.	Second 50 hrs. per month per kw-hr.	All additional per kw-hr.	Minimum per h.p. per month	Local discount	Prompt payment discount
cents	cents	cents	$ c.	%	$ c.	$ c.	cents	cents	cents	$ c.	%	%
5	2.0	0.6	0.83	10	21.00	1.00	1.8	1.1	0.33	......	10	10
5	4.5	1.0	1.39	10	35.00	1.00	3.5	2.3	0.33	......	......	10
5	2.0	0.5	0.83	10	20.00	1.00	1.6	1.0	0.33	......	10	10
5	5.8	1.0	1.94	10	40.00	1.00	4.3	2.8	0.33	......	......	10
5	2.8	1.0	1.11	10	33.00	1.00	3.2	2.1	0.33	......	......	10
5	2.3	1.0	1.11	10	32.00	1.00	3.1	2.0	0.33	......	......	10
5	2.2	0.8	0.83	10	18.00	1.00	1.9	1.2	0.33	......	25	10
5	3.5	1.0	1.39	10	32.00	1.00	3.1	2.0	0.33	......	......	10
5	2.3	0.6	0.83	10	21.00	1.00	1.8	1.1	0.33	......	10	10
5	3.0	1.0	1.39	10	30.00	1.00	2.8	1.8	0.33	......	......	10
5	2.4	0.8	1.11	10	22.00	1.00	1.9	1.3	0.33	......	10	10
5	2.3	1.0	0.83	10	24.00	1.00	2.3	1.5	0.33	......	10	10
5	2.0	0.6	1.11	10	24.00	1.00	2.3	1.5	0.33	......	10	10
5	4.0	1.0	1.39	10	40.00	1.00	4.3	2.8	0.33	......	......	10
5	2.4	0.7	1.11	10	26.00	1.00	2.2	1.4	0.33	......	......	10
5	4.0	1.0	1.39	10	40.00	1.00	4.3	2.8	0.33	......	......	10
5	2.7	0.9	0.83	10	20.00	1.00	1.6	1.0	0.33	......	10	10
5	3.0	1.0	0.83	10	32.00	1.00	3.1	2.0	0.33	......	......	10
5	2.5	1.0	1.11	10	28.00	1.00	2.5	1.6	0.33	......	......	10
5	2.3	0.8	0.83	10	18.00	1.00	1.9	1.2	0.33	......	25	10
5	2.9	0.9	1.11	10	27.00	1.00	2.3	1.5	0.33	......	......	10
5	4.5	1.0	1.67	10	32.00	1.00	3.1	2.0	0.33	......	......	10
5	2.8	0.9	1.39	10	50.00	1.00	2.8	1.8	0.33	......	......	10
5	4.5	1.0	1.66	10	50.00	1.00	5.7	3.8	0.33	......	......	10
5	3.0	0.9	1.39	10	26.00	1.00	2.2	1.4	0.33	......	......	10
5	3.9	0.9	1.11	10	40.00	1.00	4.3	2.8	0.33	......	......	10
5	3.0	1.0	1.11	10	30.00	1.00	2.8	1.8	0.33	......	......	10
5	2.8	0.9	0.83	10	36.00	1.00	3.7	2.4	0.33	......	......	10
5	3.8	1.0	0.83	10	30.00	1.00	2.8	1.8	0.33	......	......	10
5	2.2	1.0	0.83	10	27.00	1.00	2.3	1.5	0.33	......	......	10
5	3.4	0.7	1.11	10	32.00	1.00	3.1	2.0	0.33	......	......	10
5	2.0	0.6	0.83	10	24.00	1.00	2.3	1.5	0.33	......	10	10
5	3.0	0.8	1.11	10	28.00	1.00	2.5	1.6	0.33	......	......	10
5	4.0	1.0	1.39	10	36.00	1.00	3.7	2.4	0.33	......	......	10
5	2.5	0.8	1.11	10	23.00	1.00	2.1	1.4	0.33	......	10	10
5	1.9	0.5	0.83	10	16.00	1.00	1.5	0.9	0.33	......	25	10
5	2.0	0.6	0.83	10	17.00	1.00	1.7	1.1	0.33	......	25	10
5	2.1	0.8	0.83	10	24.00	1.00	2.3	1.5	0.33	......	10	10
5	1.8	0.4	0.83	10	18.00	1.00	1.9	1.2	0.33	......	25	10
5	2.0	0.6	0.83	10	20.00	1.00	1.6	1.0	0.33	......	10	10
5	2.8	0.7	0.83	10	22.00	1.00	1.9	1.3	0.33	......	10	10
5	2.4	1.0	0.83	10	28.00	1.00	2.5	1.6	0.33	......	......	10
5	3.7	1.0	1.39	10	33.00	1.00	3.2	2.1	0.33	......	......	10
5	2.8	0.7	1.11	10	21.00	1.00	1.8	1.1	0.33	......	10	10
5	2.8	0.8	1.39	10	35.00	1.00	3.5	2.3	0.33	......	......	10

STATEMENT
Cost of Power to Municipalities and Rates to Consumers for for the Year 1939, in Urban Municipalities

Municipality C—City T—Town (pop. 2,000 or more)	Annual cost to the Commission on the works to serve electrical energy to municipality on a horse-power basis	Domestic service					
		Service charge per month*	First rate		All additional per kw-hr.	Minimum gross monthly bill	Prompt payment discount
			Number of kw-hrs. per month	Per kw-hr. per month			
	$ c.	cents		cents	cents	$ c.	%
Erieau	38.91	.....	60	3.8	1.1	1.39	10
Erie Beach	49.57	.....	60	5.3	1.5	1.67	10
Essex T	29.59	.....	60	2.5	0.9	0.83	10
Etobicoke twp	23.48	.....	60	2.7	1.1	0.83	10
Exeter	30.59	.....	60	3.0	0.9	0.83	10
Fergus	28.98	.....	55	3.3	1.3	1.11	10
Finch	40.97	.....	45	3.0	1.2	1.39	10
Flesherton	43.02	.....	55	3.0	1.0	1.11	10
Fonthill	24.29	.....	60	3.4	1.1	1.39	10
Forest T	35.87	.....	60	3.5	0.9	1.11	10
Forest Hill	24.06	33–66	60	2.0	1.3	0.83	10
Fort William C	21.06	.....	60	2.1	0.9	0.83	10
Galt C	24.15	.....	60	2.8	0.8	0.83	10
Gamebridge	.....	.....	45	5.5	1.2	1.67	10
Georgetown T	29.42	.....	60	3.0	0.9	0.83	10
Glencoe	44.91	.....	60	4.0	0.9	1.11	10
Glen Williams	.....	33–66	60	2.7	1.1	0.83	10
Goderich T	32.94	.....	55	3.3	1.0	0.83	10
Grand Valley	52.22	.....	45	5.0	1.2	1.39	10
Granton	37.98	.....	60	3.3	1.2	1.11	10
Gravenhurst T	26.79	.....	55	2.2	0.9	0.83	10
Guelph C	24.03	.....	60	2.0	0.8	0.83	10
Hagersville	28.45	.....	60	2.5	1.0	0.83	10
Hamilton C	21.84	.....	60	2.4	0.8	0.83	10
Hanover T	32.62	.....	60	2.8	1.3	0.83	10
Harriston T	33.20	.....	55	3.0	1.0	1.11	10
Harrow T	31.06	.....	60	3.3	1.0	0.83	10
Hastings	39.95	.....	45	4.2	1.2	1.11	10
Havelock	43.26	.....	50	4.2	1.2	0.83	10
Hensall	37.66	.....	60	3.8	1.1	1.11	10
Hespeler T	24.10	.....	60	3.0	0.9	0.83	10
Highgate	37.04	.....	60	3.2	0.9	1.11	10
Holstein	79.40	.....	40	5.5	1.3	1.67	10
Humberstone	22.91	.....	60	2.8	0.8	0.83	10
Huntsville T	30.86	.....	60	2.0	0.9	0.83	10
Ingersoll T	25.45	.....	60	2.4	0.9	0.83	10
Jarvis	35.57	.....	60	3.4	1.0	1.11	10
Kemptville	31.74	.....	55	3.5	1.2	0.83	10
Kincardine T	41.51	.....	40	4.5	1.5	1.11	10
Kingston C	28.07	.....	50	2.2	0.8	0.83	10
Kingsville T	30.20	.....	60	2.8	0.9	0.83	10
Kirkfield	57.14	33–66	40	5.5	1.5	2.22	10
Kitchener C	23.50	.....	60	2.2	0.8	0.83	10
Lakefield	36.31	.....	50	3.6	1.2	0.83	10
Lambeth	32.83	.....	60	3.0	1.0	1.11	10

*Where domestic service charge has not been abolished the charge is 33 cents per month per service when the permanently installed appliance load is under 2,000 watts and 66 cents per month when 2,000 watts or more.

"E"—Continued

Domestic Service—Commercial Light Service—Power Service Served by The Hydro-Electric Power Commission

Commercial Light service					Power service							
Service charge per 100 watts min. 1,000 watts	First 100 hrs. per month per kw-hr.	All additional per kw-hr.	Minimum gross monthly bill	Prompt payment discount	Basis of rate 130 hours' monthly use of demand	Service charge per h.p. per month	First 50 hrs. per month per kw-hr.	Second 50 hrs. per month per kw-hr.	All additional per kw-hr.	Minimum per h.p. per month	Local discount	Prompt payment discount
cents	cents	cents	$ c.	%	$ c.	$ c.	cents	cents	cents	$ c.	%	%
5	3.6	1.0	1.39	10	40.00	1.00	4.3	2.8	0.33	2.22	......	10
5	5.0	1.0	1.67	10	50.00	1.00	5.7	3.8	0.33	......	......	10
5	2.0	0.6	0.83	10	19.00	1.00	2.0	1.4	0.33	......	25	10
5	2.0	0.6	0.83	10	20.00	1.00	1.6	1.0	0.33	......	10	10
5	2.2	0.5	0.83	10	20.00	1.00	1.6	1.0	0.33	......	10	10
5	2.6	0.7	1.11	10	22.00	1.00	1.9	1.3	0.33	......	10	10
5	2.8	1.0	1.39	10	35.00	1.00	3.5	2.3	0.33	......	......	10
5	2.5	0.8	1.11	10	30.00	1.00	2.8	1.8	0.33	......	......	10
5	2.7	0.7	1.39	10	30.00	1.00	2.8	1.8	0.33	......	......	10
5	3.0	0.6	1.11	10	30.00	1.00	2.8	1.8	0 33	......	......	10
5	2.0	0.75	0.83	10	21.00	1.00	1.8	1.1	0.33	......	10	10
5	2.0	0.4	0.83	10	17.00	1.00	1.7	1.1	‡0.33 ‡‡0.133	......	25	10
5	2.3	0.4	0.83	10	18.00	1.00	1.9	1.2	0.33	......	25	10
5	4.8	0.8	1.67	10	38.00	1.00	4.0	2.6	0.33	......	......	10
5	2.0	0.5	0.83	10	18.00	1.00	1.9	1.2	0.33	......	25	10
5	3.1	1.0	1.11	10	34.00	1.00	3.4	2.2	0.33	......	......	10
5	2.8	0.75	0.83	10	30.00	1.00	2.8	1.8	0.33	......	......	10
5	2.7	0.6	0.83	10	25.00	1.00	2.0	1.3	0.33	......	......	10
5	4.3	1.0	1.39	10	33.00	1.00	3.2	2.1	0.33	......	......	10
5	2.6	1.0	1.11	10	27.00	1.00	2.3	1.5	0.33	......	......	10
5	1.8	0.5	0.83	10	18.00	1.00	1.9	1.2	0.33	......	25	10
5	1.6	0.3	0.83	10	14.00	1.00	1.1	0.7	0.33	......	25	10
5	2.0	0.75	0.83	10	20.00	1.00	1.6	1.0	0.33	......	10	10
†5	1.6	0.35	0.83	10	15.00	1.00	1.3	0.8	0.33	......	25	10
5	2.3	0.8	0.83	10	21.00	1.00	1.8	1.1	0.33	......	10	10
5	2.6	0.7	1.11	10	25.00	1.00	2.0	1.3	0.33	......	......	10
5	2.6	0.7	0.83	10	24.00	1.00	2.3	1.5	0.33	......	10	10
5	3.8	1.0	1.11	10	37.00	1.00	3.8	2.5	0.33	......	......	10
5	3.8	1.0	0.83	10	35.00	1.00	3.5	2.3	0.33	......	......	10
5	3.3	1.0	1.11	10	26.00	1.00	2.2	1.4	0.33	......	......	10
5	2.2	0.6	0.83	10	19.00	1.00	2.0	1.4	0.33	......	25	10
5	2.8	0.7	1.11	10	29.00	1.00	2.6	1.7	0.33	......	......	10
5	5.0	0.8	1.67	10	50.00	1.00	5.7	3.8	0.33	......	......	10
5	2.0	0.5	0.83	10	20.00	1.00	1.6	1.0	0.33	......	10	10
5	1.8	0.7	0.83	10	18.00	1.00	1.9	1.2	0.33	......	25	10
5	1.9	0.5	0.83	10	17.00	1.00	1.7	1.1	0.33	......	25	10
5	2.6	0.7	1.11	10	26.00	1.00	2.2	1.4	0.33	......	......	10
5	2.8	1.0	0.83	10	27.00	1.00	2.3	1.5	0.33	......	......	10
5	3.6	0.9	1.11	10	28.00	1.00	2.5	1.6	0.33	......	......	10
5	1.6	0.5	0.83	10	16.00	1.00	1.5	0.9	0.33	......	25	10
5	1.9	0.6	0.83	10	23.00	1.00	2.1	1.4	0 33	......	10	10
5	5.5	1.0	2.22	10	40.00	1.00	4.3	2.8	0.33	......	......	10
5	1.9	0.4	0.83	10	18.00	1.00	1.9	1.2	0.33	......	25	10
5	2.8	1.0	0.83	10	24.00	1.00	2 3	1.5	0.33	......	10	10
5	2.6	0.8	1.11	10	29.00	1.00	2.6	1.7	0.33	......	......	10

‡Next 360 hours' use.
‡‡All additional.
†Min. 500 watts.

STATEMENT

Cost of Power to Municipalities and Rates to Consumers for for the Year 1939, in Urban Municipalities

Municipality C—City T—Town (pop. 2,000 or more)	Annual cost to the Commission on the works to serve electrical energy to municipality on a horse-power basis	Domestic service					
		Service charge per month*	First rate		All additional per kw-hr.	Minimum gross monthly bill	Prompt payment discount
			Number of kw-hrs. per month	Per kw-hr. per month			
	$ c.	cents		cents	cents	$ c.	%
Lanark	37.83	.....	50	4.2	1.3	0.83	10
Lancaster	53.53	.....	60	4.5	1.2	1.39	10
La Salle T	31.08	.....	60	3.8	1.2	1.11	10
Leamington T	30.32	.....	60	2.3	0.8	0.83	10
Leaside T	.....	*a*3	..	*b*1.8	1.3	0.83	10
Lindsay T	32.78	.....	60	2.5	0.9	0.83	10
Listowel T	28.97	.....	55	2.7	1.0	0.83	10
London C	23.23	.....	60	2.4	0.9	0.83	10
London twp	26.89	.....	60	2.8	0.9	1.11	10
Long Branch	24.78	.....	60	2.5	1.1	0.83	10
Lucan	29.81	.....	60	3.4	1.1	1.11	10
Lucknow	47.31	.....	45	4.5	1.5	1.67	10
Lynden	30.80	.....	60	3.4	1.1	1.39	10
Madoc	46.48	.....	50	3.2	1.2	0.83	10
Markdale	36.04	.....	55	3.1	1.1	1.11	10
Markham	29.50	.....	60	3.0	1.0	0.83	10
Marmora	36.81	.....	60	4.0	1.0	1.11	10
Martintown	37.83	.....	50	3.0	1.0	1.11	10
Maxville	48.00	.....	55	5.0	1.2	1.11	10
Meaford T	38.95	.....	60	3.0	1.1	0.83	10
Merlin	37.08	.....	60	3.8	1.0	1.11	10
Merritton T	20.03	.....	60	2.4	0.9	0.83	10
Midland T	31.98	.....	60	2.5	1.0	0.83	10
Mildmay	41.12	.....	40	3.6	1.0	1.39	10
Millbrook	42.09	33	60	5.5	2.0	0.83	10
Milton T	27.87	.....	60	3.5	1.2	0.83	10
Milverton	28.95	.....	60	2.7	1.0	0.90	10
Mimico T	22.86	.....	60	2.7	1.1	0.83	10
Mitchell T	28.86	.....	60	2.9	1.1	0.83	10
Moorefield	51.97	.....	50	4.2	1.2	1.39	10
Morrisburg	31.57	†3	60	2.0	1.0	0.83	10
Mount Brydges	32.32	.....	60	2.8	0.9	1.11	10
Mount Forest T	43.55	.....	60	2.7	1.25	0.83	10
Napanee T	29.58	.....	50	3.5	1.2	0.83	10
Neustadt	49.64	33–66	60	6.0	2.0	1.67	10
Newbury	43.62	.....	55	5.0	1.2	1.38	10
Newcastle	33.31	.....	60	5.0	1.5	1.11	10
New Hamburg	27.86	.....	60	3.3	1.1	0.83	10
New Toronto T	24.94	.....	60	2.4	1.0	0.83	10
Niagara Falls C	17.08	.....	60	2.2	0.8	0.83	10

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*Where domestic service charge has not been abolished the charge is 33 cents per month per service when the permanently installed appliance load is under 2,000 watts and 66 cents per month when 2,000 watts or more.

†Service charge per 100 sq. ft.

‡First 50 hours' use 4 cents per kw-hr. Second 50 hours' use 2 cents per kw-hr.

"E"—Continued

Domestic Service—Commercial Light Service—Power Service Served by The Hydro-Electric Power Commission

Commercial Light service					Power service							
Service charge per 100 watts min. 1,000 watts	First 100 hrs. per month per kw-hr.	All additional per kw-hr.	Minimum gross monthly bill	Prompt payment discount	Basis of rate 130 hours' monthly use of demand	Service charge per h.p. per month	First 50 hrs. per month per kw-hr.	Second 50 hrs. per month per kw-hr.	All additional per kw-hr.	Minimum per h.p. per month	Local discount	Prompt payment discount
cents	cents	cents	$ c.	%	$ c.	$ c.	cents	cents	cents	$ c.	%	%
5	3.7	1.0	0.83	10	45.00	1.00	4.9	3.3	0.33	......	......	10
5	4.5	1.0	1.39	10	56.00	1.00	6.6	4.4	0.33	......	......	10
5	3.3	1.0	1.11	10	30.00	1.00	2.8	1.8	0.33	......	......	10
5	1.8	0.5	0.83	10	19.00	1.00	2.0	1.4	0.33	......	25	10
......	c3 & 1	1/3	0.83	10	....	d1.10 0.90	2.0	1.0	e1 3 1 6	......	......	10
5	2.2	0.7	0.83	10	18.00	1.00	1.9	1.2	0.33	......	25	10
5	2.3	0.5	0.83	10	19.00	1.00	2.0	1.4	0.33	......	25	10
5	1.8	0.4	0.83	10	16.00	1.00	1.5	0.9	0.33	......	25	10
5	2.2	0.6	1.11	10	21.00	1.00	1.8	1.1	0.33	......	10	10
5	2.0	0.6	0.83	10	20.00	1.00	1.6	1.0	0.33	......	10	10
5	3.0	0.6	1.11	10	26.00	1.00	2.2	1.4	0.33	......	......	10
5	3.8	1.0	1.67	10	38.00	1.00	4.0	2.6	0.33	......	......	10
5	3.0	1.0	0.83	10	25.00	1.00	2.0	1.3	0.33	......	......	10
5	3.0	0.9	0.83	10	35.00	1.00	3.5	2.3	0.33	......	......	10
5	2.3	1.0	1.11	10	28.00	1.00	2.5	1.6	0.33	......	......	10
5	2.6	0.7	0.83	10	23.00	1.00	2.1	1.4	0.33	......	10	10
5	3.6	1.0	1.11	10	40.00	1.00	4.3	2.8	0.33	......	......	10
5	3.0	1.0	1.66	10	45.00	1.00	4.9	3.3	0.33	......	......	10
5	4.8	1.0	1.11	10	45.00	1.00	4.9	3.3	0.33	......	......	10
5	2.4	0.8	0.83	10	26.00	1.00	2.2	1.4	0.33	......	......	10
5	3.2	0.9	1.11	10	30.00	1.00	2.8	1.8	0.33	2.22	......	10
5	1.7	0.5	0.83	10	17.00	1.00	1.7	1.1	0.33	......	25	10
5	2.0	0.9	0.83	10	17.00	1.00	1.7	1.1	0.33	......	25	10
5	2.8	0.8	1.39	10	34.00	1.00	3.4	2.2	0.33	......	......	10
5	5.5	2.0	0.83	10	40.00	1.00	4.3	2.8	0.33	......	......	10
5	2.6	0.6	0.83	10	23.00	1.00	2.1	1.4	0.33	......	10	10
5	2.5	0.7	0.90	10	20.00	1.00	1.6	1.0	0.33	......	10	10
5	2.0	0.6	0.83	10	22.00	1.00	1.9	1.3	0.33	......	10	10
5	2.4	0.7	0.83	10	21.00	1.00	1.8	1.1	0.33	......	10	10
5	3.8	1.0	1.39	10	40.00	1.00	4.3	2.8	0.33	......	......	10
......	4.0 ‡ 2.0	1.0	0.83	10	25.00	1.00	2.0	1.3	0.33	......	......	10
5	2.2	0.6	1.11	10	24.00	1.00	2.3	1.5	0.33	......	10	10
5	2.2	0.9	0.83	10	28.00	1.00	2.5	1.6	0.33	......	......	10
5	2.8	0.75	0.83	10	19.00	1.00	2.0	1.4	0.33	......	25	10
5	6.0	1.0	1.67	10	40.00	1.00	4.3	2.8	0.33	......	......	10
5	4.5	1.0	1.38	10	47.00	1.00	5.2	3.5	0.33	......	......	10
5	4.5	1.5	1.11	10	30.00	1.00	2.8	1.8	0.33	......	......	10
5	2.4	0.7	0.83	10	22.00	1.00	1.9	1.3	0.33	......	10	10
5	1.8	0.5	0.83	10	18.00	1.00	1.9	1.2	0.33	......	25	10
5	1.6	0.35	0.83	10	15.00	1.00	1.3	0.8	0.33	......	25	10

*a*Service charge per 100 sq. ft.

*b*Per kw-hr. for first 3 kw-hrs. per 100 sq. ft.

*c*First 90 hours' use 3 cents per kw-hr. Next 90 hours' use 1 cent per kw-hr.

*d*First 7.5 kilowatts $1.10 per kilowatt. All additional 90 cents per kilowatt.

*e*1 3 cent per kw-hr., next 300 hours. All additional 1 6 cent per kw-hr.

STATEMENT

Cost of Power to Municipalities and Rates to Consumers for for the Year 1939, in Urban Municipalities

Municipality C—City T—Town (pop. 2,000 or more)	Annual cost to the Commission on the works to serve electrical energy to municipality on a horse-power basis	Domestic service					
		Service charge per month*	First rate		All additional per kw-hr.	Minimum gross monthly bill	Prompt payment discount
			Number of kw-hrs. per month	Per kw-hr. per month			
	$ c.	cents		cents	cents	$ c.	%
Niagara-on-the-Lake T	20.29	.....	60	2.6	1.0	0.83	10
Nipigon twp	25.71	.....	60	3.0	1.0	1.11	10
North York twp	26.29	.....	55	4.0	1.4	1.11	10
Norwich	28.77	.....	60	2.8	0.9	0.83	10
Norwood	33.23	.....	50	4.0	1.2	1.11	10
Oil Springs	35.03	.....	60	2.6	0.9	1.11	10
Omemee	.....	.....	60	3.5	1.3	0.83	10
Orangeville T	43.66	.....	55	3.0	1.0	1.11	10
Orono	39.78	33	60	5.5	2.0	1.11	10
Oshawa C	30.40	.....	50	3.8	1.1	0.83	10
Ottawa C	14.31	33–66	60 60	2.0 1.0	0.5	0.83	10
Otterville	34.02	.....	60	2.8	0.9	1.11	10
Owen Sound C	32.70	.....	60	2.1	0.8	0.83	10
Paisley	46.92	.....	45	5.0	1.0	1.39	10
Palmerston T	31.15	.....	60	2.7	1.1	1.11	10
Paris T	24.12	.....	60	2.3	0.9	0.83	10
Parkhill T	44.64	.....	60	4.2	1.1	1.39	10
Penetanguishene T	34.99	.....	55	3.2	1.1	0.83	10
Perth T	26.62	.....	55	2.8	1.0	0.83	10
Peterborough C	26.35	.....	55	2.7	1.2	0.83	10
Petrolia T	31.79	.....	60	2.7	0.8	0.83	10
Picton T	36.59	.....	60	2.8	1.0	0.83	10
Plattsville	41.15	.....	60	3.8	1.1	1.11	10
Point Edward	31.45	.....	60	3.2	1.0	0.83	10
Port Arthur C	20.85	.....	50	2.0	0.8	0.83	10 & 10
Port Colborne T	22.68	.....	60	3.0	1.0	0.83	10
Port Credit	27.33	.....	60	2.5	1.0	0.83	10
Port Dalhousie	23.72	.....	60	2.6	1.0	0.83	10
Port Dover	29.34	.....	60	2.5	0.9	0.83	10
Port Elgin	40.73	33–66	40	2.5	1.2	1.11	10
Port Hope T	30.75	.....	60	2.4	0.9	0.83	10
Port McNicoll	36.77	.....	50	4.0	1.5	0.83	10
Port Perry	44.09	.....	50	4.0	1.2	1.11	10
Port Rowan	34.21	.....	60	3.6	1.1	1.67	10
Port Stanley	32.72	.....	60	3.1	1.0	0.83	10
Prescot T	26.40	.....	60	2.3	1.0	0.83	10
Preston T	23.79	.....	60	2.6	0.8	0.83	10
Priceville	56.29	33–66	60	6.0	1.5	1.67	10
Princeton	38.80	.....	60	3.3	1.2	1.67	10
Queenston	20.87	.....	60	3.0	1.3	1.11	10

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*Where domestic service charge has not been abolished the charge is 33 cents per month per service when the permanently installed appliance load is under 2,000 watts and 66 cents per month when 2,000 watts or more.

"E"—Continued

Domestic Service—Commercial Light Service—Power Service Served by The Hydro-Electric Power Commission

Commercial Light service					Power service								
Service charge per 100 watts min. 1,000 watts	First 100 hrs. per month per kw-hr.	All additional per kw-hr.	Minimum gross monthly bill	Prompt payment discount	Basis of rate 130 hours' monthly use of demand	Service charge per h.p. per month	First 50 hrs. per month per kw-hr.	Second 50 hrs. per month per kw-hr.	All additional per kw-hr.	Minimum per h.p. per month	Local discount	Prompt payment discount
cents	cents	cents	$ c.	%	$ c.	$ c.	cents	cents	cents	$ c.	%	%
5	2.2	0.5	0.83	10	20.00	1.00	1.6	1.0	0.33	......	10	10
5	2.4	0.8	1.11	10	25.00	1.00	2.0	1.3	0.33	......	......	10
5	3.3	0.7	1.11	10	30.00	1.00	2.8	1.8	0.33	......	......	10
5	2.2	0.6	0.83	10	19.00	1.00	2.0	1.4	0.33	......	25	10
5	3.6	1.0	1.11	10	38.00	1.00	4.0	2.6	0.33	......	......	10
5	2.4	0.6	1.11	10	27.00	1.00	2.3	1.5	0.33	......	......	10
5	3.5	1.0	0.83	10	30.00	1.00	2.8	1.8	0.33	......	......	10
5	2.0	0.8	1.11	10	20.00	1.00	1.6	1.0	0.33	......	10	10
5	5.5	1.5	1.11	10	40.00	1.00	4.3	2.8	0.33	......	......	10
5	2.8	0.8	0.83	10	21.00	1.00	1.8	1.1	0.33	......	10	10
......	†5.0 ††2.2	0.5	0.83	10	18.00	1.00	1.8	1.2	0.15	......	15+10	10
5	2.5	0.6	1.11	10	26.00	1.00	2.2	1.4	0.33	......	......	10
5	1.8	0.7	0.83	10	17.00	1.00	1.7	1.1	0.33	......	25	10
5	4.4	1.0	1.39	10	42.00	1.00	4.6	3.0	0.33	......	......	19
5	2.2	0.9	1.11	10	23.00	1.00	2.1	1.4	0.33	......	10	10
5	1.8	0.4	0.83	10	16.00	1.00	1.5	0.9	0.33	......	25	10
5	4.0	0.9	1.39	10	36.00	1.00	3.7	2.4	0.33	......	......	10
5	2.8	0.8	0.83	10	22.00	1.00	1.9	1.3	0.33	......	10	10
5	2.0	0.6	0.83	10	17.00	1.00	1.7	1.1	0.33	......	25	10
5	2.3	0.9	0.83	10	18.00	1.00	1.9	1.2	0.33	......	25	10
5	2.1	0.5	0.83	10	23.00	1.00	2.1	1.4	0.33	......	10	10
5	2.0	0.8	0.83	10	19.00	1.00	2.0	1.4	0.33	......	25	10
5	3.2	1.0	1.11	10	32.00	1.00	3.1	2.0	0.33	2.00	......	10
5	2.4	0.6	0.83	10	24.00	1.00	2.3	1.5	0.33	......	10	10
5	1.8	0.3	0.83	10&10	17.00	1.00	1.7	1.1	‡ 0.33 0.133	......	25	10
5	2.5	0.6	0.83	10	23.00	1.00	2.1	1.4	0.33	......	10	10
5	2.0	0.7	0.83	10	22.00	1.00	1.9	1.3	0.33	......	10	10
5	2.0	0.6	0.83	10	17.00	1.00	1.7	1.1	0.33	......	25	10
5	2.1	0.8	0.83	10	22.00	1.00	1.9	1.3	0.33	......	10	10
5	2.5	0.8	1.11	10	26.00	1.00	2.2	1.4	0.33	......	......	10
5	2.2	0.6	0.83	10	18.00	1.00	1.9	1.2	0.33	......	25	10
5	3.5	1.0	0.83	10	35.00	1.00	3.5	2.3	0.33	......	......	10
5	3.2	1.0	1.11	10	28.00	1.00	2.5	1.6	0.33	......	......	10
5	3.2	0.9	1.67	10	32.00	1.00	3.1	2.0	0.33	......	......	10
5	2.4	0.6	0.83	10	28.00	1.00	2.5	1.6	0.33	......	......	10
5	2.0	0.8	0.83	10	19.00	1.00	2.0	1.4	0.33	......	25	10
5	2.1	0.5	0.83	10	16.00	1.00	1.5	0.9	0.33	......	25	10
5	6.0	1.0	1.67	10	40.00	1.00	4.3	2.8	0.33	......	......	10
5	3.0	1.0	1.67	10	26.00	1.00	2.2	1.4	0.33	......	......	10
5	2.8	1.0	1.11	10	25.00	1.00	2.0	1.3	0.33	......	......	10

†First 30 hours' use per kw-hr.
††Next 70 hours' use per kw-hr.
‡0.33 cents per kw-hr. for next 360 hours' use plus 0.133 cents per kw-hr. for all additional.

STATEMENT

Cost of Power to Municipalities and Rates to Consumers for for the Year 1939, in Urban Municipalities

Municipality C—City T—Town (pop. 2,000 or more)	Annual cost to the Commission on the works to serve electrical energy to municipality on a horse-power basis	Domestic service					
		Service charge per month*	First rate		All additional per kw-hr.	Minimum gross monthly bill	Prompt payment discount
			Number of kw-hrs. per month	Per kw-hr. per month			
	$ c.	cents		cents	cents	$ c.	%
Richmond	44.93	.....	35	5.0	1.5	1.67	10
Richmond Hill	27.77	33–66	60	2.0	0.8	0.83	10
Ridgetown T	30.18	.....	60	2.3	0.8	0.83	10
Ripley	61.35	.....	55	6.0	1.5	1.67	10
Riverside T	29.39	.....	60	3.7	1.1	0.83	10
Rockwood	33.28	.....	60	3.3	1.1	1.11	10
Rodney	39.53	.....	60	2.6	0.8	0.83	10
Rosseau	77.43	‡33	..	6.0	2.0	‡2.22	10
Russell	43.59	.....	55	4.8	1.2	1.39	10
St. Catharines C	20.03	.....	45–60	2.2	0.8	0.83	10
St. Clair Beach	36.72	.....	60	4.2	1.3	1.67	10
St. George	32.49	.....	60	3.2	1.1	1.11	10
St. Jacobs	26.80	.....	60	2.8	1.0	0.83	10
St. Marys T	29.21	.....	60	3.1	1.0	0.83	10
St. Thomas C	23.58	.....	60	2.4	0.8	0.83	10
Sarnia C	28.05	.....	60	2.5	0.8	0.83	10
Scarboro twp	24.99	.....	60	2.9	1.1	0.83	10
Seaforth T	29.36	.....	60	2.9	1.1	0.83	10
Shelburne	41.78	.....	50	3.8	1.0	1.11	10
Simcoe T	24.83	.....	60	2.2	0.8	0.83	10
Smiths Falls T	24.59	.....	55	3.0	1.0	0.83	10
Southampton T	40.07	.....	40	3.6	1.2	1.11	10
Springfield	40.65	.....	60	3.6	1.1	1.11	10
Stamford twp	17.36	.....	60	3.0	1.0	0.83	10
Stayner T	36.81	.....	55	3.0	1.1	0.83	10
Stirling	27.03	.....	60	2.5	1.0	0.83	10
Stouffville	33.96	.....	60	3.0	1.1	0.83	10
Stratford C	25.10	.....	60	2.8	0.9	0.83	10
Strathroy T	26.68	.....	60	2.6	0.8	0.83	10
Streetsville	29.64	.....	55	3.5	1.0	0.83	10
Sunderland	48.91	.....	45	4.7	1.2	1.39	10
Sutton	38.56	.....	50	4.0	1.5	1.11	10
Swansea	25.67	33–66	60	2.0	1.3	0.83	10
Tara	42.76	.....	40	4.5	1.8	1.11	10
Tavistock	28.78	.....	60	3.0	1.0	0.83	10
Tecumseh T	33.09	.....	60	4.0	1.1	1.11	10
Teeswater	46.28	.....	50	5.0	1.3	1.39	10
Thamesford	31.05	.....	60	2.7	0.9	1.11	10
Thamesville	31.37	.....	60	2.6	0.9	0.83	10
Thedford	51.48	.....	55	5.0	1.2	1.11	10
Thorndale	38.55	.....	60	4.5	1.5	1.39	10
Thornton	53.13	.....	60	6.0	1.5	1.67	10
Thorold T	21.21	.....	60	2.2	0.8	0.83	10
Tilbury T	31.07	.....	60	2.2	0.8	0.83	10
Tillsonburg T	26.82	.....	60	2.3	0.8	0.83	10

*Where domestic service charge has not been abolished the charge is 33 cents per month per service when the permanently installed appliance load is under 2,000 watts and 66 cents per month when 2,000 watts or more.

"E"—Continued

Domestic Service—Commercial Light Service—Power Service Served by The Hydro-Electric Power Commission

Commercial Light service					Power service							
Service charge per 100 watts min. 1,000 watts	First 100 hrs. per month per kw-hr.	All additional per kw-hr.	Minimum gross monthly bill	Prompt payment discount	Basis of rate 130 hours' monthly use of demand	Service charge per h.p. per month	First 50 hrs. per month per kw-hr.	Second 50 hrs. per month per kw-hr.	All additional per kw-hr.	Minimum per h.p. per month	Local discount	Prompt payment discount
cents	cents	cents	$ c.	%	$ c.	$ c.	cents	cents	cents	$ c.	%	%
5	5.0	1.0	1.67	10	55.00	1.00	6.5	4.3	0.33	......	......	10
5	2.0	0.5	0.83	10	22.00	1.00	1.9	1.3	0.33	......	10	10
5	1.8	0.5	0.83	10	18.00	1.00	1.9	1.2	0.33	......	25	10
5	5.0	1.0	1.67	10	50.00	1.00	5.7	3.8	0.33	......	......	10
5	2.6	0.7	0.83	10	25.00	1.00	2.0	1.3	0.33	......	......	10
5	2.5	0.7	1.11	10	32.00	1.00	3.1	2.0	0.33	......	......	10
5	2.3	0.5	0.83	10	25.00	1.00	2.0	1.3	0.33	......	......	10
5	6.0	2.0	‡2.22	10	58.00	1.00	6.9	4.6	0.33	......	......	10
5	4.5	1.0	1.39	10	50.00	1.00	5.7	3.8	0.33	......	......	10
†5	1.5	1.3	0.83	10	14.00	1.00	1.1	0.7	§0.33 0.16	......	25	10
5	4.3	1.0	1.67	10	35.00	1.00	3.5	2.3	0.33	......	......	10
5	2.7	0.6	1.11	10	26.00	1.00	2.2	1.4	0.33	......	......	10
5	2.4	0.7	0.83	10	21.00	1.00	1.8	1.1	0.33	......	10	10
5	2.5	0.8	0.83	10	23.00	1.00	2.1	1.4	0.33	......	10	10
5	1.7	0.3	0.83	10	15.00	1.00	1.3	0.8	0.33	......	25	10
5	1.9	0.4	0.83	10	19.00	1.00	2.0	1.4	0.33	......	25	10
5	2.2	0.5	0.83	10	23.00	1.00	2.1	1.4	0.33	......	10	10
5	2.2	0.7	0.83	10	21.00	1.00	1.8	1.1	0.33	......	10	10
5	2.5	0.9	1.11	10	23.00	1.00	2.1	1.4	0.33	......	10	10
5	1.8	0.4	0.83	10	19.00	1.00	2.0	1.4	0.33	......	25	10
5	2.0	0.5	0.83	10	18.00	1.00	1.9	1.2	0.33	......	25	10
5	2.8	0.8	1.11	10	25.00	1.00	2.0	1.3	0.33	......	......	10
5	3.0	1.0	1.11	10	34.00	1.00	3.4	2.2	0.33	......	......	10
5	2.0	0.5	0.83	10	16.00	1.00	1.5	0.9	0.33	......	25	10
5	2.3	0.9	0.83	10	23.00	1.00	2.1	1.4	0.33	......	10	10
5	2.0	1.0	0.83	10	21.00	1.00	1.8	1.1	0.33	......	10	10
5	2.6	0.7	0.83	10	25.00	1.00	2.0	1.3	0.33	......	......	10
5	2.0	0.4	0.83	10	21.00	1.00	1.8	1.1	0.33	......	10	10
5	2.0	0.5	0.83	10	19.00	1.00	2.0	1.4	0.33	......	25	10
5	2.5	0.7	0.83	10	26.00	1.00	2.2	1.4	0.33	......	......	10
5	4.0	1.0	1.39	10	35.00	1.00	3.5	2.3	0.33	......	......	10
5	3.7	1.0	1.11	10	36.00	1.00	3.7	2.4	0.33	......	......	10
5	2.0	0.75	0.83	10	21.00	1.00	1.8	1.1	0.33	......	10	10
5	3.6	0.8	1.11	10	38.00	1.00	4.0	2.6	0.33	......	......	10
5	2.3	0.7	0.83	10	21.00	1.00	1.8	1.1	0.33	......	10	10
5	3.2	0.7	1.11	10	26.00	1.00	2.2	1.4	0.33	......	......	10
5	4.0	1.0	1.39	10	40.00	1.00	4.3	2.8	0.33	......	......	10
5	2.1	0.6	1.11	10	21.00	1.00	1.8	1.1	0.33	......	10	10
5	2.0	0.5	0.83	10	24.00	1.00	2.3	1.5	0.33	......	10	10
5	4.6	1.0	1.11	10	48.00	1.00	5.4	3.6	0.33	......	......	10
5	3.7	0.9	1.39	10	42.00	1.00	4.6	3.0	0.33	......	......	10
5	5.5	1.0	1.67	10	40.00	1.00	4.3	2.8	0.33	......	......	10
5	1.6	0.35	0.83	10	16.00	1.00	1.5	0.9	0.33	......	25	10
5	1.7	0.4	0.83	10	17.00	1.00	1.7	1.1	0.33	......	25	10
5	1.8	0.4	0.83	10	19.00	1.00	2.0	1.4	0.33	......	25	10

‡According to consumers' demand.

†Min. 500 watts.

§0.33 cents per kw-hr. for next 200 hours' use, plus 0.16 cents per kw-hr. for all additional.

STATEMENT

Cost of Power to Municipalities and Rates to Consumers for for the Year 1939, in Urban Municipalities

Municipality C—City T—Town (pop. 2,000 or more)	Annual cost to the Commission on the works to serve electrical energy to municipality on a horse-power basis	Domestic service					
		Service charge per month*	First rate		All additional per kw-hr.	Minimum gross monthly bill	Prompt payment discount
			Number of kw-hrs. per month	Per kw-hr. per month			
	$ c.	cents		cents	cents	$ c.	%
Toronto............C	22.22	*a*3	..	*b*1.8	1.0	0.83	10
Toronto twp..........	26.88	.....	60	2.9	1.0	1.11	10
Tottenham...........	66.28	.....	35	5.5	1.5	1.67	10
Trafalgar Twp. Area 1.	26.55	.....	60	3.1	1.7	0.83 ‡2.22	10
Trafalgar Twp. Area 2.	28.16	.....	60	3.6	1.2	1.11	10
Trenton.............T	24.60	.....	50	3.0	1.0	0.83	10
Tweed...............	45.51	.....	50	4.2	1.2	1.11	10
Uxbridge............T	46.06	.....	50	3.6	1.2	1.11	10
Victoria Harbour......	43.08	.....	60	2.8	1.0	1.11	10
Walkerton..........T	32.54	.....	50	3.6	1.1	1.11	10
Wallaceburg.........T	30.53	.....	60	2.6	0.8	0.83	10
Wardsville...........	45.65	.....	60	5.5	1.5	1.67	10
Warkworth...........	34.66	.....	50	4.0	1.2	1.11	10
Waterdown...........	26.17	.....	60	2.5	1.0	0.83	10
Waterford............	26.07	.....	60	2.4	0.9	0.83	10
Waterloo............T	23.92	.....	60	2.3	0.9	0.83	10
Watford.............	36.81	.....	60	3.3	1.0	1.11	10
Waubaushene.........	35.60	.....	55	3.0	1.0	1.11	10
Welland............C	18.90	.....	60	2.8	0.9	0.83	10
Wellesley............	35.25	.....	50	4.0	1.1	1.11	10
Wellington...........	35.13	33–66	50	2.5	1.25	0.83	10
West Lorne..........	34.82	.....	60	2.8	0.8	0.83	10
Weston.............T	23.08	.....	60	2.4	0.9	0.83	10
Westport............	53.01	.....	45	5.0	2.0	1.94	10
Wheatley............	38.59	.....	60	3.4	1.0	0.83	10
Whitby.............T	30.35	.....	60	2.8	1.0	0.83	10
Wiarton............T	49.94	.....	50	3.2	1.0	1.39	10
Williamsburg.........	29.92	.....	60	2.0	0.8	0.83	10
Winchester...........	30.29	.....	60	2.4	1.2	0.83	10
Windermere..........	48.96	†33	..	5.0	2.0	†2.22	10
Windsor............C	24.94	.....	60	3.3	0.8	0.83	10
Wingham...........T	46.02	.....	50	3.2	1.1	1.11	10
Woodbridge..........	26.79	.....	60	3.0	1.1	0.83	10
Woodstock..........C	24.16	.....	60	2.2	0.8	0.83	10
Woodville............	46.64	.....	50	3.8	1.0	1.11	10
Wyoming............	42.44	.....	60	3.3	0.9	1.11	10
York Twp............	.....	33–66	60	2.0	1.3	0.83	10
Zurich..............	43.47	.....	60	4.2	1.0	1.39	10

*Where domestic service charge has not been abolished the charge is 33 cents per month per service when the permanently installed appliance load is under 2,000 watts and 66 cents per month when 2,000 watts or more.

*a*Service charge per 100 sq. ft.

*b*Per kw-hr. for first 3 kw-hrs. per 100 sq. ft.

*c*First 90 hours' use 3 cents per kw-hr. Next 90 hours' use 1 cent per kw-hr.

"E"—Continued

Domestic Service—Commercial Light Service—Power Service Served by The Hydro-Electric Power Commission

Commercial Light service					Power service							
Service charge per 100 watts min. 1,000 watts	First 100 hrs. per month per kw-hr.	All additional per kw-hr.	Minimum gross monthly bill	Prompt payment discount	Basis of rate 130 hours' monthly use of demand	Service charge per h.p. per month	First 50 hrs. per month per kw-hr.	Second 50 hrs. per month per kw-hr.	All additional per kw-hr.	Minimum per h.p. per month	Local discount	Prompt payment discount
cents	cents	cents	$ c.	%	$ c.	$ c.	cents	cents	cents	$ c.	%	%
..	*c*3 & 1	1/3	0.83	10	....	*d* D.C. A.C.	3.0 2.0	1.2 1.0	0.60 *e*1/3 1/6	......	......	10
5	2.2	0.6	1.11	10	22.00	1.00	1.9	1.3	0.33	......	10	10
10	5.0	1.0	1.67	10	35.00	1.00	3.5	2.3	0.33	......	......	10
5	2.8	0.7	0.83	10	28.00	1.00	2.5	1.6	0.33	......	......	10
5	2.8	0.7	1.11	10	28.00	1.00	2.5	1.6	0.33	......	......	10
5	2.6	0.8	0.83	10	18.00	1.00	1.9	1.2	0.33	......	25	10
5	3.8	1.0	1.11	10	30.00	1.00	2.8	1.8	0.33	......	......	10
5	3.0	0.9	1.11	10	28.00	1.00	2.5	1.6	0.33	......	......	10
5	2.2	0.8	1.11	10	30.00	1.00	2.8	1.8	0.33	......	......	10
5	2.4	0.9	1.11	10	28.00	1.00	2.5	1.6	0.33	......	......	10
5	2.0	0.5	0.83	10	19.00	1.00	2.0	1.4	0.33	......	25	10
5	5.0	1.0	1.67	10	42.00	1.00	4.6	3.0	0.33	......	......	10
5	3.0	1.0	1.11	10	32.00	1.00	3.1	2.0	0.33	......	......	10
5	2.0	0.5	0.83	10	18.00	1.00	1.9	1.2	0.33	......	25	10
5	1.9	0.6	0.83	10	17.00	1.00	1.7	1.1	0.33	......	25	10
5	1.9	0.4	0.83	10	18.00	1.00	1.9	1.2	0.33	......	25	10
5	2.9	0.9	1.11	10	30.00	1.00	2.8	1.8	0.33	......	......	10
5	2.2	1.0	1.11	10	33.00	1.00	3.2	2.1	0.33	......	......	10
5	2.0	0.5	0.83	10	17.00	1.00	1.7	1.1	0.33	......	25	10
5	3.5	1.0	1.11	10	28.00	1.00	2.5	1.6	0.33	......	......	10
5	2.5	1.0	0.83	10	34.00	1.00	3.4	2.2	0.33	......	......	10
5	2.3	0.5	0.83	10	25.00	1.00	2.0	1.3	0.33	......	......	10
5	1.6	0.4	0.83	10	17.00	1.00	1.7	1.1	0.33	......	25	10
5	5.0	1.0	1.94	10	45.00	1.00	4.9	3.3	0.33	......	......	10
5	3.0	0.9	0.83	10	30.00	1.00	2.8	1.8	0.33	......	......	10
5	2.3	0.6	0.83	10	24.00	1.00	2.3	1.5	0.33	......	10	10
5	3.3	0.8	1.39	10	35.00	1.00	3.5	2.3	0.33	......	......	10
5	2.0	0.8	0.83	10	32.00	1.00	3.1	2.0	0.33	......	......	10
5	2.0	0.8	0.83	10	24.00	1.00	2.3	1.5	0.33	......	10	10
5	5.0	2.0	†2.22	10	40.00	1.00	4.3	2.8	0.33	......	......	10
5	2.4	0.6	0.83	10	21.00	1.00	1.8	1.1	0.33	......	10	10
5	2.6	0.8	1.11	10	28.00	1.00	2.5	1.6	0.33	......	......	10
5	2.4	0.6	0.83	10	19.00	1.00	2.0	1.4	0.33	......	25	10
5	1.8	0.4	0.83	10	16.00	1.00	1.5	0.9	0.33	......	25	10
5	2.8	0.8	1.11	10	28.00	1.00	2.5	1.6	0.33	......	......	10
5	3.0	0.8	1.11	10	32.00	1.00	3.1	2.0	0.33	......	......	10
5	2.0	0.75	0.83	10	21.00	1.00	1.8	1.1	0.33	......	10	10
5	3.9	0.9	1.39	10	40.00	1.00	4.3	2.8	0.33	......	......	10

*d*D.C. service charge $1.50 per kw. per month for first 7½ kw., plus $1.05 per kw. for all additional demand.

A.C. service charge $1.10 per kw. per month for first 7½ kw., plus $0.90 per kw. for all additional demand.

*e*1/3 cent per kw-hr. for next 300 hours' use, plus 1/6 cent per kw-hr. for all additional.

‡Over 10 kilowatt.

†According to consumers' demand.

APPENDIX I

ACTS

CHAPTER 35

An Act to amend The Power Commission Act.

Assented to April 27th, 1939.
Session Prorogued April 27th, 1939.

HIS MAJESTY, by and with the advice and consent of the Legislative Assembly of the Province of Ontario, enacts as follows:

Rev. Stat., c. 62, s. 12, subs. 1, amended.

1.—(1) Subsection 1 of section 12 of *The Power Commission Act* is amended by striking out the word "shall" in the second line and inserting in lieu thereof the word "may", and by striking out clause *c*, so that the said subsection shall now read as follows:

Stabilization fund account.

(1) An account to be known as the "stabilization fund account" may be opened and maintained on the books of the Commission and the Commission may place to the credit of such account,—

(*a*) such amounts as the Commission may determine and collect for the purposes of this section from its customers;

(*b*) interest at such rates as the Commission shall deem equitable and just upon balances remaining from time time to time to the credit of the account.

Rev. Stat., c. 62, s. 12, subs. 2, repealed.

(2) Subsection 2 of the said section 12 is repealed.

Rev. Stat., c. 62, amended.

2. *The Power Commission Act* is amended by adding thereto the following section:

Ownership of works retained.

33*a*. Where works of the Commission have been affixed to realty, they shall remain subject to the rights of the Commission as fully as they were before being so affixed unless otherwise agreed by the Commission in writing.

Rev. Stat., c. 62, s. 71, re-enacted.

3. Section 71 of *The Power Commission Act* is repealed and the following substituted therefor:

Contracts for supply of power.

71.—(1) Subject to the approval of the Lieutenant-Governor in Council, the Commission may contract with the corporation of a township, or townships, or with the corporations of two or more townships, for the supply and distribution by the Commission of electrical power in the township or townships.

Defining areas.

(2) The Commission may lay out and define areas, called "rural power districts," in the township or townships for the distribution of electrical power.

Commission acts for corporation.

(3) The Commission may, on behalf of the coropration,—

(*a*) acquire, construct, extend, reconstruct, hold, maintain, operate and adminster all lands and works necessary for the transmission to and the transforming and distributing in, any such rural power district of electrical power;

(*b*) supply electrical power to any customer of the corporation or at any premises in any such rural power district;

(*c*) perform, enjoy and enforce all contracts in which the corporation agrees to supply or sell electrical power to any customer or at any premises in such rural power district.

Alterations of boundary.

(4) The Commission may unite any two or more rural power districts in one rural power district and may join into a rural power district or may include in a rural power district one or more townships or any part or parts thereof whether already part of any rural power district or not and may alter the boundaries of any rural power district.

Signing of contracts.

(5) Contracts in which the municipal corporation agrees to supply or sell electrical power shall be sufficiently executed on behalf of the corporation if signed by its clerk or by such other officer as may be designated by the council of the corporation.

Powers given to Commission.

71*a*. For the purposes of this Part, the Commission may exercise any of the powers which the Commission may exercise or be authorized to exercise under Part I.

Rev. Stat., c. 62, s. 76, subs. 3, amended.

4. Subsection 3 of section 76 of *The Power Commission Act* is amended by striking out all the words in the first two lines and inserting in lieu thereof the words "In any such area, the Commission may," and by inserting after the word "all" in the second line of clause *a* the words "lands and", so that the said subsection shall now read as follows:

Supply of power.

(3) In any such area, the Commission may,—

(*a*) acquire, construct, extend, reconstruct, hold, maintain, operate and adminster all lands and works necessary for the transmission to and the transformation and distribution and supply of electrical power or energy in any such area;

(*b*) distribute and supply electrical power or energy in any such area;

(*c*) contract with any person, firm or corporation for the supply of electrical power or energy in any such area.

5. Section 77 of *The Power Commission Act* is amended by adding at the end thereof the words, "except where the contract is with a municipal corporation for the supply of power from any of the works mentioned in section 47," so that the section shall now read as follows:

Rev. Stat., c. 62, s. 77, amended.

77. All the provisions of Part II as to the annual payments to be made by the corporations which have entered into contracts with the Commission shall apply to a contract entered into under this Part, and shall extend to the works constructed under the contract for transforming, distributing and supplying electrical power or energy in a rural power district except where the contract is with a municipal corporation for the supply of power from any of the works mentioned in section 47.

Application of Part II as to annual payments.

6. Section 78 of *The Power Commission Act* is amended by striking out all the words after the word "Commission" in the third line and inserting in lieu thereof the words, "under this Act," so that the section shall now read as follows:

Rev. Stat., c. 62, s. 78, amended.

78. The rates to be charged to customers receiving electrical power or energy from the Commission in a rural power district shall be fixed by the Commission under this Act.

Rates to be fixed by Commission

7. By-law number 1072 of the corporation of the town of Arnprior; By-law number 582 of the corporation of the village of Beamsville; By-law number 660 of the corporation of the village of Millbrook; By-law number 579 of the corporation of the village of Newcastle; By-law number 1030 of the corporation of the township of Clarke, and all debentures issued or to be issued or purporting to be issued under any of the said by-laws are confirmed and declared to be legal, valid and binding upon the said corporations and the ratepayers thereof respectively, and shall not be open to question upon any ground whatsoever notwithstanding the requirements of *The Power Commission Act* or *The Municipal Act* or any amendments thereto or any other general or special Act of this Legislature.

By-laws confirmed.

Rev Stat., cc. 62, 266

8. By-law number 132 for the year 1937 of the corporation of the city of Windsor and the agreement between the said corporation and The Windsor Utilities Commission thereby authorized are confirmed and declared to be legal, valid and binding upon the said corporation and the ratepayers thereof and The Windsor Utilities Commission.

By-law confirmed.

9. This Act may be cited as *The Power Commission Amendment Act, 1939*.

Short title.

CHAPTER 41

An Act to amend The Rural Hydro-Electric Distribution Act.

Assented to April 27th, 1939.
Session Prorogued April 27th, 1939.

HIS MAJESTY, by and with the advice and consent of the Legislative Assembly of the Province of Ontario, enacts as follows:

Rev. Stat., c. 64, s. 1, amended.

1. Section 1 of *The Rural Hydro-Electric Distribution Act* is amended by striking out the words "municipality or commission" in the fourth and fifth lines and inserting in lieu thereof the words "commission or municipal corporation," and by striking out all the words after the word "cost" in the seventh line and inserting in lieu thereof the words "of acquiring and constructing in the rural power district, lands and works, including plant, machinery, installations, materials, devices, fittings, apparatus, appliances and equipment, for the supply of power to any customer or premises up to the point of delivery by such commission or corporation," so that the said section shall now read as follows:

Grants in aid of distribution works in rural power districts.

Rev. Stat., c. 62,

> 1. Upon the recommendation of The Hydro-Electric Power Commission of Ontario and the order of the Lieutenant-Governor in Council, the Treasurer of Ontario may pay out of the Consolidated Revenue Fund to any commission or municipal corporation distributing power in a rural power district under the provisions of *The Power Commission Act,* a sum not exceeding fifty per centum of the capital cost of acquiring and constructing in the rural power district, lands and works, including plant, machinery, installations, materials, devices, fittings, apparatus, appliances and equipment, for the supply of power to any customer or premises up to the point of delivery by such commission or corporation.

Rev. Stat., c. 64, s. 3, amended.

2. Section 3 of *The Rural Hydro-Electric Distribution Act* is amended by striking out the words "municipal corporations or commissions" in the first line and inserting in lieu thereof the words "any commission or municipal corporation," so that the said section shall now read as follows:

Grants chargeable to capital account.

> 3. All sums paid to any commission or municipal corporation under the authority of section 1 or section 2 shall be chargeable in the books of the Treasurer of Ontario as expenditure upon capital account.

Short title.

3. This Act may be cited as *The Rural Hydro-Electric Distribution Amendment Act, 1939.*

SECOND SESSION 1939

CHAPTER 8

The Power Control Act, 1939

Assented to September 22nd, 1939.
Session Prorogued September 22nd, 1939.

HIS MAJESTY, by and with the advice and consent of the Legislative Assembly of the Province of Ontario, enacts as follows:

1. In this Act,— Interpretation.

(*a*) "Commission" shall mean The Hydro-Electric Power Commission of Ontario. "Commission";

(*b*) "land" shall mean real property of whatsoever nature or kind, and shall include tenements, hereditaments and appurtenances, any estate, term, easement, right or interest in, to, over, under or affecting land, and water rights, water powers and water privileges; "land";

(*c*) "owner" shall include mortgagee, lessee, tenant, occupant, or any person entitled to any estate or interest in land or works, and a guardian, committee, executor, administrator or trustee in whom land or works or any property or interest therein is vested; "owner";

(*d*) "power" shall include hydraulic, electrical, steam or other power and shall also include energy; "power".

(*e*) "regulations" shall mean regulations made under this Act; "regulations".

(*f*) "supply" shall include delivery, dealing in, and sale; and "supply";

(*g*) "works" shall include all property, plant, machinery, installations, materials, devices, fittings, apparatus, appliances and equipment constructed, acquired or used in the generation, transformation, transmission, distribution, supply or use of power. "works".

Powers of Commission.

2. The Commission shall have authority to regulate and control the generation, transformation, transmission, distribution, supply and use of power in Ontario, and, without limiting the generality of the foregoing, the Commission may,—

(*a*) restrict or prohibit the supply or use of any power or the supply or use of power to or by any person and divert or apportion power or give priority or preference to any user of power in order to effect, what is in the opinion of the Commission, the most economical, efficient and equitable use and distribution of power;

(*b*) direct any owner to generate or supply power at any specified rate not exceeding the full capacity of his works;

(*c*) hear and decide any dispute between any owner and any user of power concerning any matter over which the Commission has jurisdiction under this Act and make such direction as it deems proper in accordance with its decision;

(*d*) decide and direct to whom, at what prices and under what conditions power may be supplied; and

(*e*) do such acts and give such directions as may be necessary for the carrying out or enforcement of the provisions of this Act and the regulations.

Regulations.

3. Subject to the approval of the Lieutenant-Governor in Council, the Commission may make regulations,—

(*a*) requiring any owner to furnish to the Commission information regarding,—

(i) his land and works including the capacity, output, cost and use thereof;

(ii) his assets, liabilities, revenues, expenses and operations; and

(iii) the supply of power by him to other persons including particulars of quantities, prices, terms, conditions, points of delivery and use;

(*b*) requiring any person to furnish to the Commission information regarding the supply of power to him, including particulars of quantities, prices, terms, conditions, points of delivery and use, and by whom supplied;

(*c*) prescribing the manner of deciding and determining preferences and priorities in the supply and use of power and providing for the apportioning of power among different users or classes of users and the diversion of power from one or more users or classes of users to other users or classes thereof;

(*d*) restricting or prohibiting the supply or use of power for any particular purpose;

(*e*) providing for the setting of prices at which and for the fixing of terms and conditions under which power may be supplied in Ontario, either generally or for one or more users or classes of users;

(*f*) providing for the entry upon and inspection of land and works including the making of inventories and valuations thereof, the examination of books, accounts, records and documents relating thereto and generally the obtaining of information in connection therewith; and

(*g*) generally for the carrying out of the provisions of this Act.

Protection for failure to supply.

4. When any owner or other person is unable to supply power under any contract or obligation because of compliance with this Act or the regulations or any direction of the Commission made thereunder, such owner or other person shall be relieved from all liability for his failure to supply power on account of such inability.

Acquisition of land and works.

5.—(1) Where the Commission is satisfied that any owner is not using his land and works, or either of them, to full capacity or best advantage for the generation or supply of power or is neglecting or refusing to comply with any direction of the Commission or the provisions of this Act or the regulations, the Commission may purchase or acquire and may, without the consent of the owner, enter upon, take and expropriate any of his lands or works which it may deem necessary for the generation, transformation, transmission, distribution or supply of power.

Title acquired.

(2) Where lands or works are purchased, acquired, entered upon, taken or expropriated under this section the Commission, in its discretion, may acquire absolute title or a limited estate, right or interest therein either on a rental basis or otherwise as it deems desirable in the circumstances provided that whether or not it acquires absolute title to any such land or works, the Commission may use such land and works in such manner as it deems proper and may divert water therefrom, close, repair, rehabilitate, extend, improve or reconstruct such works and may construct other works in lieu thereof or in addition thereto.

Manner of expropriation.

Rev. Stat., cc. 62; 54.

(3) The provisions of *The Power Commission Act* and *The Public Works Act* as to the purchase, acquisition, entry upon, taking and expropriation of land and the fixing, payment, and application of compensation therefor shall apply *mutatis mutandis* to the purchase, acquisition, entry upon, taking and expropriation of land and works under this Act, provided that where any of the provisions of *The Power Commission Act* conflict with any of the provisions of *The Public Works Act*, the former shall prevail.

Penalties.

6.—(1) Every owner or other person who violates any of the provisions of this Act or the regulations or who neglects or refuses to comply with any direction of the Commission shall be liable for a first offence, to a penalty not exceeding $5,000, for a second offence, to a penalty not exceeding $10,000 and for a subsequent offence, to a penalty not exceeding $25,000, and where such owner or other person is a corporation, the president, directors and the manager or other person in charge shall each be personally liable to a similar penalty.

Recovery o penalties. Rev. Stat., c. 136.

(2) The penalties imposed by this section may be recovered under the provisions of *The Summary Convictions Act* and shall be payable to the Commission.

Other powers of Commission.

7.—(1) In exercising or performing any power or duty conferred or imposed upon it by this Act or the regulations the Commission shall have and may exercise any authority, right, power, privilege or immunity which it possesses under *The Power Commission Act* or any other Act or under any other authority.

Rev. Stat., c. 62.

Idem.

(2) The powers conferred by this Act shall be deemed to be in addition to and not in derogation of any power conferred upon the Commission by any other Act, but where the provisions of any other Act conflict with the provisions of this Act the latter shall prevail.

Commencement of Act.

8. This Act shall come into force on the day upon which it receives the Royal Assent.

Short title.

9. This Act may be cited as *The Power Control Act, 1939.*

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PROVINCIAL AUDITOR'S REPORT

1938-39

PRINTED BY ORDER OF
THE LEGISLATIVE ASSEMBLY OF ONTARIO
SESSIONAL PAPER No. 27

ONTARIO

TORONTO
Printed and Published by T. E. BOWMAN, Printer to the King's Most Excellent Majesty
1940

Provincial Auditor's Office,

January 5th, 1940.

The Honourable M. F. Hepburn,
Provincial Treasurer.

Sir: I have the honour to submit, for the information of the Legislative Assembly, my report for the year ended March 31st, 1939, in accordance with the requirements of the Audit Act.

Respectfully submitted,

H. A. Cotnam, C.A.,
Provincial Auditor.

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A

LEGAL OPINION

A

LEGAL OPINION

Re Transfer of Appropriations

OFFICE OF PROVINCIAL AUDITOR

Toronto, January 19th, 1939.

MR. I. A. HUMPHRIES,
Deputy Attorney-General,
Buildings.

Re: Appropriations for fiscal year ending March 31st, 1939.

Dear Mr. Humphries:

May I have your opinion as to whether the Lieutenant-Governor in Council is authorized to transfer appropriations for the several services sanctioned by the Appropriation Act for the year in either of the following ways?

(1) By transferring monies from one vote and item to another vote and item.

(2) By transferring monies from one item of a vote to another item of the same vote.

Yours very truly,

(Sgd.) H. A. COTNAM,
Provincial Auditor.

DEPARTMENT OF THE ATTORNEY-GENERAL OF ONTARIO

Toronto, Ont., January 21st, 1939.

H. A. COTNAM ESQ.,
Provincial Auditor,
Parliament Buildings,
Toronto, Ontario.

Re: Appropriations for fiscal year ending March 31st, 1939.

Dear Sir:

Replying to your letter of January 19th, I have carefully considered the question that you ask, my view is that these items of votes are earmarked for the particular amount of money which has been voted by the legislature.

For example, in the Attorney-General's Department you have Vote No. 20, Item 1, dealing with salaries, and then you have also Vote No. 20, Item 4, a vote of $10,000 for Crown Counsel prosecutions. In my view these are two separately earmarked votes and appropriations, and I know of no power or authority which would permit the Lieutenant-Governor in Council to take some of the $10,000 in Item No. 4, which has been appropriated for Crown Counsel prosecutions, and use that money to make up a deficit in Item No. 1 for salaries.

Section 23 of the Audit Act, chapter 24, R. S. O. 1937 contemplates the keeping of an appropriation ledger in which shall be entered the supply grants comprised in the Appropriation Act for the year, and I believe that you keep a separate ledger and items for each of the items in the votes. I therefore answer your questions (1) and (2) in the negative.

Yours faithfully,

(Sgd.) I. A. HUMPHRIES,
Deputy Attorney-General.

B

TREASURY BOARD MINUTES

B

TREASURY BOARD MINUTES

STATEMENT OF TREASURY BOARD MINUTES ISSUED FOR EXPENDITURES IN EXCESS OF APPROPRIATIONS DURING THE FISCAL YEAR ENDED MARCH 31st. 1939

Department of Agriculture

	Warrant	Expended
Statistics and Publications Branch: Maintenance	$ 200 00	$ 182 12
Agricultural and Horticultural Societies Branch:		
Field Crop Competitions, prizes and expenses	1,000 00	860 90
Fruit Branch: Salaries	1.000 00	1,000 00
Kemptville Agricultural School: Expenses	405 00	404 51
Ontario Veterinary College, Guelph: Salaries	861 27	861 27
Demonstration Farm, New Liskeard:		
Salaries	820 00	782 62
Maintenance, wages, etc	37 00	27 37
Demonstration Farm, Hearst: Maintenance, wages, etc	3,500 00	3.490 30
Northern Ontario Branch: Equipment and contingencies	150 00	142 52
Ontario Agricultural College, Guelph:		
General Office, expenses	19,400 00	19.190 10

Department of Attorney-General

	Warrant	Expended
Main Office:		
Salaries	50 00	43 32
Commissions and Sundry Investigations	18.450 00	18,432 65
Law Library: Books, reports, etc	100 00	75 33
Shorthand Reporters: Services, reporting and travelling expenses	3,100 00	3,018 82
Criminal Justice Accounts:		
Audit Office, salaries	620 00	618 89
Districts: General Administration of Justice	52,000 00	51.999 09
Public Trustee's Office:		
Salaries	1,650 00	1,646 60
Maintenance	2,500 00	2,378 79
Accountant's Office, Supreme Court of Ontario:		
Salaries	700 00	698 34
Fire Marshal's Office: Salaries	650 00	650 00
Inspector of Legal Offices:		
Inspector's Office:		
Travelling expenses	500 00	499 72
Maintenance	100 00	26 69
Local Masters of Titles Office: Salaries	1.160 00	1,157 52

Department of Education

	Warrant	Expended
Main Office: Proportion of cost of Minister's Report	400 00	340 02
Public Records and Archives Branch:		
Purchase of documents. etc	100 00	53 30
Public and Separate School Education:		
Public and Separate Schools. grants. etc	250.000 00	233.681 59
Assisted Public and Separate Schools. grants. etc	35.000 00	34.990 71
Kindergarten Schools, grants, etc	1.500 00	1.466 40
Night Schools, grants, etc	200 00	163 13
Agriculture and Horticulture. grants. etc	6.000 00	5.646 22
Courses by Itinerant Teachers, school cars, etc	3.500 00	3.270 03
Auxiliary Classes, grants, etc	6.200 00	5.921 91
Spring and Summer Schools, travelling expenses and maintenance	13.000 00	12.565 50
Art Departments, grants, etc	300 00	296 27
Courses in Music, grants, etc	20.000 00	19.693 98
Inspection of Schools Branch:		
Travelling and moving expenses of inspectors, etc	10.000 00	7.655 37
Departmental Examinations Branch:		
Salaries	100 00	71 88
Maintenance	2.000 00	1.260 86
Services and travelling expenses	3.000 00	2.299 11
Training Schools Branch:		
Travelling and moving expenses of teachers	150 00	74 39

	Warrant	Expended
Normal and Model Schools:		
Toronto: Maintenance	1.300 00	1,200 72
Ottawa: Maintenance	800 00	342 69
London: Salaries	350 00	249 96
Hamilton: Maintenance	200 00	108 67
Stratford: Travelling Expenses	250 00	192 45
University of Ottawa: Payment to R. C. Separate School Board for use of Schools	200 00	120 00
High Schools and Collegiate Institutes Branch:		
Salaries	2.500 00	2,350 00
Grants: Courses in Music	7,000 00	6,618 48
Vocational Education Branch: Salaries	1,500 00	1.375 00
Belleville School for the Deaf: Travelling expenses	200 00	81 21
Brantford School for the Blind: Salaries	1.100 00	998 43

Department of Game and Fisheries

Main Office:		
General:		
Moving expenses of Officers of the Department	200 00	185 11
Erecting ponds, buildings, etc	2,000 00	1,902 91
Grant. Ontario Fur Farmers Association	1,500 00	1.500 00

Department of Health

Main Office:		
Travelling expenses	600 00	126 61
Maintenance	5,000 00	3.566 00
Cancer Control: Salaries	450 00	383 95
Dental Service Branch: Maintenance	150 00	93 91
Preventable Diseases Branch: Salaries	2,200 00	1.975 00
Tuberculosis Prevention Branch:		
Salaries	250 00	134 78
Travelling expenses	600 00	523 47
Maintenance	550 00	506 33
Ottawa Unit: Salaries	250 00	103 68
Timmins Unit: Travelling expenses	100 00	59 70
Industrial Hygiene Branch:		
Maintenance	325 00	301 47
Laboratory Divisions:		
North Bay: Travelling expenses	300 00	226 50
Western University, London: Maintenance	375 00	358 03
Queen's University, Kingston: Maintenance	250 00	212 96
Hospitals Branch:		
General Office: Grants, etc.:		
General Hospitals	1,200 00	1,093 41
Hospitals for Incurables	7,000 00	6,997 90
Maintenance of patients in Sanatoria for Consumptives	133,000 00	129,323 81
Travelling and incidental expenses for removal of indigent patients, etc	1.500 00	1,484 60
General Expenses, Ontario Hospitals:		
Printing and stationery	2.500 00	2,277 91
Ontario Hospitals:		
Kingston: Repairs to buildings, etc	1,500 00	838 01
London: Repairs to buildings, etc	4,300 00	3.737 49
Toronto: Maintenance	4,000 00	3,944 33
" Repairs to buildings, etc	1,000 00	202 24
Woodstock: Repairs to buildings, etc	1.500 00	880 85

Department of Insurance

Main Office:		
Maintenance	1,000 00	883 20
Printing Annual Reports	1,600 00	1,327 09

Department of Lands and Forests

Main Office: Annuities and bonuses to Indians under Treaty No. 9	810 00	800 00
Forests Branch: Air Service, operating expenses, etc	11.000 00	10,927 07

Department of Legislation

	Warrant	Expended
Office of the Speaker:		
Indemnities—Members, including mileage	1,000 00	606 80
Maintenance	3.300 00	2,447 10
Office of Law Clerk: Maintenance	100 00	80 67

Department of Municipal Affairs

Main Office: Commissions and sundry investigations	3,000 00	961 57

Department of the Prime Minister

Main Office: Salaries	158 33	158 33
Office of Executive Council: Salaries	72 92	72 92
Travel and Publicity Bureau:		
Salaries	2.400 00	2,348 89
Printing and distributing booklets, etc	2.600 00	2,583 13

Department of Provincial Secretary

Reformatories and Prisons Branch:		
Main Office:		
Maintenance	500 00	453 80
Grants:		
P. S. No. 1, Guelph Township	150 00	146 97
Industrial Schools	8.000 00	7,278 25
Ontario Reformatories:		
Guelph: Industries	195.000 00	168.812 36
Mimico:		
General maintenance	10.000 00	5.650 11
Repairs to buildings, etc	3,000 00	2,158 04
Industries	13.000 00	12.795 18
Mercer, Toronto:		
Salaries	1.500 00	1.267 23
Industries	67,500 00	63.422 62
Industrial Farm, Burwash:		
Salaries	1.000 00	532 82
General maintenance	9.000 00	8.991 27
Ontario Training School for Boys, Bowmanville:		
General maintenance	33.000 00	30.449 68
Ontario Training School for Girls, Galt:		
Salaries	1.850 00	1.796 08
General maintenance	3.100 00	3.020 95

Department of Provincial Treasurer

Office of Budget Committee: Salaries	187 50	187 50
Controller of Revenue Branch:		
Travelling expenses	16.000 00	8.885 77
Fees	5.000 00	4.001 93

Department of Public Welfare

Main Office:		
Maintenance of indigents	3.250 00	3.218 70
Grants:		
Refuges	1.300 00	1,281 60
Orphanages	2.900 00	2.841 05
Children's Aid Branch:		
Services and expenses re Children's Protection Act, etc	8,000 00	7.961 27
Mothers' Allowances Commission:		
Maintenance	2,000 00	1.903 66
Old Age Pensions Commission:		
Salaries	23.600 00	22.295 00
Travelling expenses	6.300 00	5.648 55
Blind Pensions	80.000 00	66.425 53

Department of Public Works

	Warrant	Expended
Public Buildings. Maintenance and Repairs:		
Lieutenant-Governor's Apartment, maintenance	1,000 00	842 26
Legislative and Departmental Buildings:		
Cleaning of buildings, etc.	61,000 00	52,272 71
Maintenance, repairs and alterations	17,500 00	15,884 22
Osgoode Hall: Cleaning of buildings and incidentals	500 00	246 75
Agricultural Buildings: Repairs and incidentals	3,500 00	699 91
Miscellaneous: Restoring monuments, burial grounds, St. Andrews West	1,200 00	1,076 24
Public Buildings, Construction, etc.:		
Ontario Reformatory, Guelph:		
Additions, alterations and equipment	80,000 00	44,940 47
Industrial Farm, Burwash:		
Additions, alterations and equipment	25,000 00	15,883 84
District Buildings:		
Temiskaming: Construction of Mining Recorder's Office and Lock-up, Elk Lake	6,000 00	4,855 16
Thunder Bay: Lock-up, Geraldton	4,000 00	3,994 86
Provincial Parks: Construction of Community Hall at Rondeau Park	9,000 00	4,410 81
Fish Hatcheries: Construction and alterations	65,000 00	64.935 17
Miscellaneous: Purchase of property	4,500 00	4,013 70
Total Treasury Board Minutes	$1,448.782 02	$1,282,895 50

C

SPECIAL WARRANTS

C
SPECIAL WARRANTS

STATEMENT OF SPECIAL WARRANTS ISSUED DURING THE FISCAL YEAR ENDED MARCH 31st, 1939

Date of Warrant	SERVICE		Warrants	Expended 1938-39	Unexpended
	Department of Attorney-General				
	Rewards in connection with bush and forest fires in the Province of Ontario—				
	Balance unexpended, 1937-38	$400 00			
November 30th, 1938	Warrant	100 00			
December 16th, 1938	"	200 00	700 00	700 00	
November 30th, 1938	Rewards re gold concentrates stolen from Dome Mines Ltd., South Porcupine, Ontario		2,500 00	833 33	1,666 67
	Payment of honorariums, services, expenses, etc., in connection with the preparation of briefs and attendance at hearings before the Royal Commission appointed to re-examine the basis of Confederation—				
	Balance unexpended, 1937-38		632 17	158 34	473 83
	Department of Health				
May 28th, 1938	Mrs. Olive Carpenter, Rainy River, for maintenance of Amos L. Smith, an ex-patient of the Red Cross Hospital at Rainy River		360 00	330 00	30 00
July 13th, 1938	St. Michael's Hospital, Toronto, for the purchase of Deep Therapy X-Ray Equipment		30,000 00	30,000 00	
September 10th, 1938	Expenses of the Commission for the Investigation of Cancer Remedies		10,000 00	2,556 72	7,443 28
November 3rd, 1938	Hospitalization of Transients: Kirkland District Red Cross Hospital, Kirkland Lake, $745.60; Kenora General Hospital, Kenora, $121.80; Queen Victoria Memorial Hospital, North Bay, $342.00		1.209 40	1.209 40	
December 16th, 1938	The Essex County Sanatorium, contribution toward providing a new kitchen for the Institution		12,500 00	12,500 00	
	Department of Labour				
	Dominion-Provincial Youth Training Programme, services, grants and expenses—				
	Balance unexpended, 1937-38		88,050 08	48,141 07	39,909 01
	Department of the Prime Minister				
July 13th, 1938	Funeral expenses of the late Honorable M. M. MacBride		383 70	383 70	

	Department of Provincial Secretary				
February 9th, 1939	Honorarium for special services in connection with the Ontario Board of Parole: R. S. Clark, $750.00; L. J. Long, $750.00		1,500 00	1,500 00	
	Department of Provincial Treasurer				
June 28th, 1938	Compensation to O. J. Silverthorne for loss of automobile which was totally destroyed in an accident while on official business		500 00	500 00	
	Department of Public Welfare				
November 30th, 1938	The Canadian Red Cross Society, Ontario Division, for the purpose of assisting in the relief and rehabilitation of fire sufferers in the Rainy River District		25,000 00	25,000 00	
	Department of Public Works				
May 10th, 1938	Equipment, instruments, scows, boats, rubber boots, motor trucks, cars; Lock-masters, Bridge Tenders, Caretakers, etc.; maintenance of locks, dams, bridges, etc.; wages and expenses of Supervising Foreman; cutting and purchase of timber and construction materials; municipal drainage and storage dams		40,000 00	29,512 09	10,487 91
	Grant to the Counties of Prescott and Russell for flood prevention on the Nation River				
May 10th, 1938	Warrant	15,000 00			
August 18th, 1938	"	44,500 00			
November 3rd, 1938	"	47,680 00	107,180 00	16,157 88	91,022 12
May 10th, 1938	Grant to the City of Sault Ste. Marie for the Bayview Drainage Scheme		1,500 00	1,500 00	
August 18th, 1938	Provincial Government's share of maintenance cost of Perley Bridge between Hawkesbury, Ontario, and Grenville, Quebec, on expenditure incurred during the fiscal year April 1st, 1937, to March 31st, 1938		1,326 61	1,326 61	
August 18th, 1938	Initial payment to the Grand River Conservation Commission by the Ontario Government for its share (37½%) of the cost of the construction of the Grand River Conservation Scheme		37,500 00	10,000 00	27,500 00
October 13th, 1938	Hydro-Electric Power Commission of Ontario for survey and report as to the feasibility of flood control in the Thames River Valley		9,887 93	9,887 93	
February 28th, 1939	Expenses in connection with the visit of Their Majesties		7,000 00	6,692 81	307 16
	Miscellaneous				
June 28th, 1938	Grant to the Canadian Corps Reunion, 1938, Incorporated		12,500 00	12,500 00	
August 18th, 1938	Grant to the Association des Medecines de Langue Francaise de l'Amerique du Nord, to assist in defraying expenses re the 15th meeting of the Association, Ottawa, September 5-8, 1938		1,000 00	1,000 00	
	TOTAL SPECIAL WARRANTS		$391,229 89	$212,389 91	$178,839 98

REPORT FOR 1939

OF

The Workmen's Compensation Board

ONTARIO

PRINTED BY ORDER OF
THE LEGISLATIVE ASSEMBLY OF ONTARIO
SESSIONAL PAPER NO. 28, 1940

ONTARIO

TORONTO
Printed and Published by T. E. BOWMAN, Printer to the King's Most Excellent Majesty
1940

HON. N. O. HIPEL,
MINISTER OF LABOUR,
PARLIAMENT BUILDINGS,
TORONTO, ONTARIO.

DEAR MR. HIPEL,

I have the honour to submit herewith the Report of The Workmen's Compensation Board for the year 1939.

Yours very truly,

J. HAROLD,
Chairman

THE WORKMEN'S COMPENSATION BOARD

JOHN HAROLD,
Chairman

DR. D. J. GALBRAITH,
Vice-Chairman

W. D. SMITH, M.B.,
Commissioner

S. R. JOHNSTON,
Secretary

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REPORT FOR 1939

OF

The Workmen's Compensation Board

ONTARIO

Offices:

4th Floor, Canada Life Building,
330 University Ave., Toronto.

To His Honour the Lieutenant-Governor:

The Workmen's Compensation Board begs to submit its Report for the year 1939.

GENERAL REVIEW

During the year 1939 employment in industry under Schedule 1 of the Act increased appreciably and this was reflected in both assessments received and in accidents reported. The provisional pay roll in Schedule 1 for 1938 was estimated at $481,275,700, at an average rate of $1.31 on every $100 of pay roll; for 1939 the provisional pay roll was $530,262,800, at an average rate of $1.06.

Accidents and Benefits

During 1939 there were reported to the Board 60,520 accidents, as compared with 59,834 in 1938, and 70,582 in 1937.

The total benefits awarded during the year amounted to $6,152,407.53, as compared with $6,464,261.19 during 1938, and $6,129,960.55 during 1937. Of the total benefits awarded during the year, $5,057,714.23 was for compensation and $1,094,693.30 was for medical aid.

The total benefits awarded from the commencement of the Act (January 1, 1915) to January 1, 1940, amounted to $134,953,555.52, and the total accidents reported during the same period were 1,373,677.

Assessments

The average rate charged during the twenty-five year period was $1.18 for every $100 of pay roll. For 1939 the average rate was $1.06, as compared with $1.31 for 1938, a decrease of 19 per cent. Notwithstanding this decrease in rate, and 6 per cent. reduction in the previous year, the financial security of the Accident Fund has not been impaired, the provisional surplus to the credit of the classes at December 31, 1939, being $2,648,711.01, as compared with $2,621,717.55 credit at December 31, 1938.

Finances

The Board's financial position continues solvent and satisfactory. After outstanding liabilities are properly valuated, there remains a provisional surplus of $2,648,711.01 standing at the credit of the classes, a Disaster Reserve of $228,782.11, a Reserve for Depreciation of Securities of $963,468.56, an excess of $406,716.92 in the Silicosis Account of cash over liabilities for silicosis in the mining industry, and $4,043.30 standing at the credit of the Rehabilitation Clinic. This makes a total of $4,251,721.90, as compared with $4,406,915.36 at the end of 1938. These assets in excess of liabilities are in addition to accrued interest on investments.

This balance of $4,251,721.90 is held in trust for the employers and forms a working capital for the Board. It is always to be remembered that this money has been collected from the employers largely by way of assessment in addition to what has actually been required to meet the losses arising from accidents and the expense of administering the Act and the cost of employers' safety associations.

In addition there was at December 31, 1939, $24,838,874.49 in the Pension Fund to pay pensions to widows, children and disabled workmen, which pensions run for life or lesser periods, and which were calculated on an actuarial basis. The amount in the Pension Fund is not a reserve, as there is a corresponding liability of equal amount to pay the pensions. From time to time actuarial revaluation of this fund is made to ensure the proper amount.

Investments

All the Board's funds, except the cash necessary for current operations, are invested, the investments in Schedule 1 totalling $34,376,204.27. On this amount a rate of 4.38 per cent. per annum was received in 1939.

At the end of 1939 there was in default in Schedule 1, $84,814.25 principal and $249,547.92 interest, a total of $334,362.17, as compared with a total of $358,395.17 at the end of 1938, $422,850.83 at the end of 1937, and $664,147.76 at the end of 1936. During 1939 the accruing interest in default totalled $48,534.09, as compared with $60,892.19 during 1938, and $79,097.15 during 1937.

The Board's portfolio of investments shows 67 per cent. held in obligations of the Dominion and Ontario Governments, and 33 per cent. in municipal and county direct or guaranteed debentures.

Safety Associations

The Board has continued and increased its aid towards the Safety Associations. During 1939, $218,511.25 was paid, as compared with $192,250.00 in 1938. The Board realizes the effective aid that may be rendered by these associations towards accident prevention.

Occupational Therapy

The Occupational Therapy Clinic instituted in 1938 has been continued. This clinic provides assistance to recovery and return to work of injured workmen and has become an effective part of the Board's programme.

Public Relations

The Board has continued to assist groups of employers and workmen to a better understanding of The Workmen's Compensation Act and its administration. Many meetings have been attended by the Members of the Board and its Staff and explanation of any phase of compensation administration is cheerfully given. It is sincerely hoped that an increasing number of such groups will take advantage of the service offered.

Twenty-five Years of the Act

The year 1939 closed twenty-five years' experience of The Workmen's Compensation Act. It is the Board's intention to publish appropriate information of this period at a later date.

Contents of the Report

The chapters following contain the particulars of the Board's operations during 1939, and the Appendix a resumé of operations since January 1, 1915.

Dated at Toronto this 23rd day of February, 1940.

J. HAROLD, Chairman.
D. J. GALBRAITH, Vice-Chairman.
W. D. SMITH, Commissioner.

CHAPTER I

SCHEDULE I INDUSTRIES FOR 1939

As some of the industries covered by the Act are under the collective liability system (the employer not being individually liable for accidents to his workmen but being assessed to provide a general fund out of which accidents occurring in his class of industry throughout the Province are taken care of) and others are under the individual liability system (the employer being liable to pay for accidents happening to his own workmen), separate financial statements have to be made for each. The industries under the collective liability system are included in Schedule 1, and those under individual liability in Schedule 2, the former comprising much the greater number.

This chapter deals with Schedule 1 industries for 1939. Schedule 2 industries are dealt with in Chapter II, while Chapter III deals with the work handled in both schedules and the administration of the Act generally during the year, Chapter IV with the different funds in both schedules and their standing at the end of 1939, and Chapter V gives financial and statistical information for 1938 which was not available when the report for that year was made.

Provisional Financial Statement

The provisional financial statement for the industries in Schedule 1 for 1939 is contained in Table 1. To show the standing for the year, estimates have to be made of adjustments of assessments according to actual pay rolls and on the retroactive rates (the assessments for the year being first levied on an estimate of pay roll and at a provisional rate), and estimates also have to be made of compensation and medical aid still to be awarded for accidents happening during the year which have not yet been finally disposed of by reason of the injured workman being still under medical treatment or reports not being received. These estimates contain also all liabilities for claims of previous years yet outstanding and provision for claims of prior years which may subsequently be adjusted. Final figures for the year 1939 will be shown in the next subsequent report in the same manner as the final figures for 1938 are shown in Table 15 of this report.

The difference is to be noted between the amount of compensation and medical aid awarded for the year's accidents and the amount awarded during the year. The latter is partly for the prior year's accidents, while upon the other hand it does not cover all the liability for the current year's accidents. The more correct system of charging each year as far as possible with its own accidents, and for that purpose keeping the year's accounts open till the end of the subsequent year, has been adopted, rather than the looser method of taking the amount awarded during the year as the cost of the year's accidents and leaving always an outstanding liability unprovided for. For the purpose of information and comparison, however, the amounts awarded during the year are shown in Chapter III.

Accounts for Each Class

The industries in Schedule 1 are divided into classes, and as each class (subject to any transfer that may be made to it from the Disaster Reserve in any case of undue burden) bears its own accident cost— the employers in the class being in effect a mutual insurance association— separate accounts have to be kept for the different classes. Each class is credited with its own assessments, its share of interest and other income, and with any transfer made to it from

Disaster Reserve, or credit from any other source, and charged with the cost of its own accidents, its share of administration expenses, the cost of its safety association if it has one, and with its share of any amount set aside for Disaster Reserve.

The figures for each class, and the provisional surplus or deficit for the year, and the balance forward from prior years, and the provisional surplus or deficit for all years, are shown in Table 1. The final figures for each class and also the figures for the different groups within the classes (as in Table 15) will be shown in the next report. The assessments are fixed according to the accident cost and other expenses and charges in each class and group and having regard to the other income and credits.

The classes are numbered and the nature of the industries in each is shown at the bottom of Table 1 and full enumeration of the industries will be found in Schedule 1 of the Act and in the Board's rate book, the latter also showing the grouping within the Class.

Assessments and Other Credits

The total assessments in all classes in Schedule 1 for the year 1939, including estimated adjustments, amounted to $5,637,916.40. In assessments are included collections for default in making returns or payments and interest for under and over estimate of pay roll. The other income and credits for the year consisted of interest on investments and funds not elsewhere credited; reimbursement for veteran cases received from the Department of Pensions and National Health; cost of accidents collected under Section 107 for failure to furnish pay roll prior to accident; recovery from third parties under Section 8; receipts by virtue of Section 84 (4); receipts by virtue of special orders under Section 90 (5); collections under Section 114 (3) from employers for failure to furnish particulars of accidents, and refunds of accident costs. Other incomes and credits amounted to $298,721.94. The total income and credits for the year are, therefore, $5,936,638.34.

Compensation and Other Charges

The compensation and medical aid for Schedule 1 industries for the year, including estimate for what is still to be awarded for accidents happening during the year and for prior years' accidents, amounted to $6,267,561.03. There were other outlays amounting to $663,965.27, including administration expenses of $414,666.41; Section 8 disbursements, $1,087.40; examinations for pneumoconiosis, $66.14; mine rescue work, $18,928.47; Safety Associations, $218,511.25; and Occupational Therapy, $10,705.60. The total expenditures and charges for the year, including adjustments for prior years' accidents, were $6,931,526.30.

The provisional deficit for the year, including the carry-over for prior years' claims, was $994,887.96, which, deducted from the surplus forward from prior years, makes a net provisional surplus of $2,648,711.01 at December 31st, 1939.

Number of Employers

The total number of employers listed in Schedule 1 at the end of 1939 was 24,973, as compared with 24,144 at the end of 1938. The number in each class and group of industry is shown in Table 2.

Wage Expenditure

The estimated total wage expenditure in Schedule 1 industries for the year 1939, calculated on provisional figures, is $530,262,800.00, as compared with $481,275,700.00 in 1938. The amounts for the different classes of industry are shown in Table 3.

The Board has no similar data for Schedule 2 and Crown industries as in these the employers pay for accidents to their own workmen and are not required to make pay roll returns or pay assessments upon them as in Schedule 1. The pay roll would probably be about one-third that of Schedule 1.

Average Rates of Assessment

Assessments in Schedule 1 are in the form of a percentage of pay roll, and the average rate or percentage over all the classes actually paid by the employers can be ascertained by relating the total assessments to the total wage expenditure. This, on the provisional figures, gives an average rate of assessment for 1939 of $1.06 on every $100.00 of pay roll. The average rate for all years since the commencement of the Act was $1.18. The decline in the over-all rate was due in part to refund of differential rating plan penalties collected in 1937 and 1938 and later refunded.

Class	INCOME AND CRE	
	Collected on Provisional Assessments	Estimat Adjustme of Assessme
	$ c.	$
1	464,780.68	30,00
2	285,075.72	−72,00
3	65,828.06	75
4	139,278.09	21,00
5	1,026,811.40	108,58
6	150,328.80	−23,80
7	95,109.12	− 9,00
8	192,258.42	−46,30
9	140,700.82	9,10
10	357,490.48	−65,60
11	317,003.84	−73,00
12	186,780.15	−31,30
13	84,236.36	5,60
14	67,941.78	− 8,75
15	335,884.82	12,90
16	95,278.39	− 1,80
17	103,585.16	8,00
18	66,164.38	−14,00
19	88,457.90	6,35
20	293,586.38	50,15
21	275,714.64	23,60
22	274,550.13	−43,00
23	80,123.83	9,25
24	572,417.05	−18,20
ALL	5,759,386.40	**121,47

**Adjusted on actual

‡Includes: Sec. 8, $
from Acciden

*Includes: Disburse
$414,666.41;

†Includes Mine Resc

1. Lumbering.
2. Pulp and paper
3. Furniture manu
4. Planing mills, et
5. Mining and exp
6. Brick manufac
works.
7. Rolling mills, et
8. Foundries, etc.

TABLE 1

PROVISIONAL FINANCIAL STATEMENT FOR SCHEDULE 1, BY CLASSES, AS AT DECEMBER 31, 1939

Class	INCOME AND CREDITS (Actual and Estimated)				EXPENDITURE AND CHARGES (Actual and Estimated)						Balance Forward Prior Years	SURPLUS OR DEFICIT ALL YEARS (Provisional)	Class
					Compensation and Medical Aid			Pneumoconiosis Outstanding	All Other Outlays	TOTAL AS AT DEC. 31, 1939			
	Collected on Provisional Assessments	Estimated Adjustments of Assessments	All Other Income	TOTAL	Awarded	Estimated	Total						
	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	
1	464,780.68	30,000.00	1,827.56	496,608.24	279,019.12	171,708.42	450,727.54	....	72,277.22	523,004.76	−4,601.53	−30,998.05	1
2	285,075.72	−72,000.00	9,865.32	222,941.04	91,049.59	77,511.49	168,561.08	....	30,971.15	199,532.23	149,047.54	172,456.35	2
3	65,828.06	750.00	891.56	67,469.62	34,974.79	9,838.85	44,813.64	....	7,784.01	52,597.65	12,191.12	27,063.09	3
4	139,278.09	21,000.00	226.98	160,505.07	72,180.05	68,826.54	141,006.59	....	18,910.82	159,917.41	−6,904.69	−6,317.03	4
5	1,026,811.40	108,580.00	51,251.66	1,186,643.06	529,972.68	703,117.50	1,233,090.18	25,228.62	†106,879.16	1,365,197.96	736,650.74	558,095.84	5
6	150,328.80	−23,800.00	6,744.43	133,273.23	45,022.25	43,525.62	88,547.87	233,244.01	19,538.16	341,330.04	101,634.85	−106,421.96	6
7	95,109.12	− 9,000.00	6,855.20	92,964.32	38,422.79	34,218.34	72,641.13	16,500.00	10,295.00	99,436.13	105,101.32	98,629.51	7
8	192,258.42	−46,300.00	13,702.16	159,660.58	41,368.24	47,900.94	89,269.18	540,949.12	22,223.21	652,441.51	191,011.73	−301,769.20	8
9	140,700.82	9,100.00	25,718.72	175,519.54	74,361.52	93,827.50	168,189.02	53,981.27	20,204.60	242,374.89	237,186.89	170,331.54	9
10	357,490.48	−65,600.00	18,327.42	310,217.90	122,822.33	93,617.07	216,439.40	112,641.50	38,341.87	367,422.77	251,927.27	194,722.40	10
11	317,003.84	−73,000.00	16,125.53	260,129.37	114,183.88	106,069.01	220,252.89	117,883.97	35,819.60	373,956.46	240,688.73	126,861.64	11
12	186,780.15	−31,300.00	16,529.02	172,009.17	64,690.45	57,867.75	122,558.20	5,500.00	18,674.61	146,732.81	246,617.03	271,893.39	12
13	84,236.36	5,600.00	21,704.54	111,540.90	28,480.25	36,796.90	65,277.15	....	7,025.87	72,303.02	8,049.03	47,286.91	13
14	67,941.78	− 8,750.00	2,308.31	61,500.09	25,054.75	10,256.17	35,310.92	5,500.00	7,508.94	48,319.86	32,257.63	45,437.86	14
15	335,884.82	12,900.00	7,530.08	356,314.90	170,782.46	121,593.35	292,375.81	....	44,254.16	336,629.97	60,989.65	80,674.58	15
16	95,278.39	− 1,800.00	6,225.04	99,703.43	48,890.70	33,921.81	82,812.51	10,467.00	10,728.47	104,007.98	94,889.28	90,584.73	16
17	103,585.16	8,000.00	3,407.57	114,992.73	57,527.19	59,605.28	117,132.47	....	12,660.71	129,793.18	42,915.56	28,115.11	17
18	66,164.38	−14,000.00	3,345.17	55,509.55	22,085.23	28,913.40	50,998.63	....	7,674.05	58,672.68	40,462.76	37,299.63	18
19	88,457.90	6,350.00	1,059.31	95,867.21	32,021.94	23,615.64	55,637.58	10,467.90	10,252.72	76,358.20	15,733.03	35,242.04	19
20	293,586.38	50,150.00	6,018.47	349,754.85	147,161.95	100,205.40	247,367.35	....	24,068.97	271,436.32	66,549.46	144,867.99	20
21	275,714.64	23,600.00	20,635.24	319,949.88	138,466.27	131,234.07	269,700.34	....	37,582.46	307,282.80	233,290.61	245,957.69	21
22	274,550.13	−43,000.00	11,880.57	243,430.70	108,476.50	116,972.68	225,449.18	....	21,907.55	247,356.73	177,494.62	173,568.59	22
23	80,123.83	9,250.00	18,793.73	108,167.56	26,295.16	100,604.37	126,899.53	....	7,981.56	134,881.09	286,797.47	260,083.94	23
24	572,417.05	−18,200.00	27,748.35	581,965.40	223,167.33	270,201.84	493,369.17	56,770.28	70,400.40	620,539.85	323,618.87	285,044.42	24
ALL	5,759,386.40	**121,470.00	‡298,721.94	5,936,638.34	2,536,477.42	2,541,949.94	5,078,427.36	1,189,133.67	*†663,965.27	6,931,526.30	3,643,598.97	2,648,711.01	ALL

**Adjusted on actual pay rolls and retroactive rates.

‡Includes: Sec. 8, $7,647.85; Sec. 84 (4), $1,150.00; Sec. 90 (5) $25.00; Sec. 107, $3,247.64; Sec. 114, $404.35; Reimbursement from the D.P. & N.H., $43,003.00; from Accident Cost Refunds, $4,841.05; Interest, $238,403.05.

*Includes: Disbursements under Sec. 8, $1,087.40; for Occupational Therapy, $10,705.60; for Safety Associations, $218,511.25; for Administrative Expense, $414,666.41; for Pneumoconiosis Examinations, $66.14.

†Includes Mine Rescue Work, $18,928.47.

Class Numbers of Industries

1. Lumbering.
2. Pulp and paper mills.
3. Furniture manufacturing, etc.
4. Planing mills, etc.
5. Mining and explosives.
6. Brick manufacturing, quarrying, and glass works.
7. Rolling mills, etc.
8. Foundries, etc.
9. Fabrication structural steel, etc.
10. Metal articles, jewellery manufacturing, etc.
11. Agricultural implements, etc.
12. Gas, petroleum, paint, drugs, soap, etc.
13. Milling.
14. Abattoirs, etc.
15. Bakeries, canning, liquors, and tobacco.
16. Tanneries, leather and rubber goods.
17. Textiles.
18. Clothing, power laundries, etc.
19. Printing and stationery.
20. Teaming, cartage, coal and wood yards, etc.
21. Road construction, etc.
22. Electric power, etc.
23. Steel construction, railway and canal construction, dredging, fishing, etc.
24. Building.

TABLE 2

NUMBER OF FIRMS IN SCHEDULE 1, BY CLASSES AND GROUPS, DECEMBER 31, 1939

Class	Group 0	Group 1	Group 2	Group 3	Group 4	Group 5	Group 6	Group 7	Group 8	Group 9	TOTALS
1	474	448	......	74	......	......	......	......	......	......	996
2	71	......	15	......	......	......	......	......	......	......	86
3	293	......	......	......	......	......	......	......	......	......	293
4	340	......	236	......	......	......	......	......	......	......	576
5	......	490	4	......	......	8	14	4	......	......	520
6	70	114	8	133	53	103	104	......	......	......	585
7	15	......	......	......	......	......	......	......	......	......	15
8	101	......	40	42	......	......	......	......	......	......	183
9	18	13	1	......	171	15	......	......	......	......	218
10	353	278	38	65	67	32	201	115	......	......	1,149
11	51	760	......	1	......	......	......	......	......	......	812
12	40	253	121	21	263	......	......	......	......	......	698
13	522	85	......	......	......	......	......	......	......	......	607
14	113	......	......	......	......	......	......	......	......	......	113
15	417	298	70	126	65	219	26	......	......	......	1,221
16	51	106	79	59	......	......	......	......	......	......	295
17	127	132	45	......	......	......	......	......	......	......	304
18	703	195	......	......	......	......	......	......	......	......	898
19	285	686	......	......	......	......	......	......	......	......	971
20	2,080	1,219	......	......	......	......	......	......	......	......	3,299
21	163	57	......	......	......	......	......	......	......	......	220
22	171	228	299	950	......	......	......	......	......	......	1,648
23	77	42	340	......	......	......	......	......	......	......	459
24	4,076	467	......	609	1,333	1,330	414	232	......	346	8,807
All											24,973

TABLE 3

ESTIMATE OF WAGE EXPENDITURE, SCHEDULE 1 BY CLASSES, FOR 1939

Class	Wage Expenditure
1	$ 9,480,000
2	19,020,000
3	7,410,000
4	8,960,000
5	62,705,000
6	8,513,900
7	16,066,400
8	8,334,400
9	20,653,700
10	50,336,000
11	46,325,400
12	33,900,000
13	6,030,000
14	7,933,000
15	43,070,000
16	24,720,000
17	25,350,000
18	23,600,000
19	30,100,000
20	13,300,000
21	9,610,000
22	32,205,000
23	2,240,000
24	20,400,000
TOTAL	$530,262,800

CHAPTER II

SCHEDULE 2 INDUSTRIES DURING 1939

Table 4 is a statement of the compensation awarded and the moneys handled during 1939 in Schedule 2 industries (in which the employer is individually liable for accidents to his workmen). Dominion Crown Cases under the Act by Dominion legislation and Provincial Crown Cases referred to the Board for adjustment are included.

The total amount of compensation awarded in Schedule 2 industries and Crown cases during 1939 was $883,306.27. Of this amount, $217,104.13 was for workmen of municipal corporations; $192,834.79 for steam railroads; $11,435.40 for electric railways; $36,686.56 for navigation companies; $1,943.50 for express and sleeping-car companies; $12,253.61 for telephone and telegraph companies; and $2,458.20 for all other industries in Schedule 2; $270,550.96 for Dominion Crown Cases and $138,039.12 for Provincial Crown Cases. Of the total amount awarded, $531,384.64 was for pensions in pension cases and $351,921.63 was for cases not pension cases and for compensation not pensions in pension cases.

In pension cases, except in the case of municipal or government bodies or departments thereof, not so desiring, deposits must be made by employers in Schedule 2 industries. Particulars of these are given under "Deposits under Section 28". Under "Claimants' Moneys" are included moneys held by the Board under awards in which in the interest of the claimant, or for some other reason, payment of the amounts held is deferred to a later date, as in the case of minors. "Deposits under Section 32" are amounts deposited with the Board to enable the Board to make prompt payments without waiting for receipt of cheque from employer.

Employers in Schedule 2 are assessed their share of the expense of administration as set out in Table 8. For 1939 that share amounted to $16,944, as compared with $32,565.12 in 1938, and $23,159.11 in 1937. Proportionate to the amount of compensation awarded, administration expenses in Schedule 2 and Crown Cases were 4.06 per cent. in 1939, as compared with 6.71 per cent. in 1938, and 4.94 per cent. in 1937.

Further information as to Schedule 2 funds and particulars of Schedule 2 investments are given in Chapter IV, and in Tables 9 and 14, and in the Appendix.

TABLE 4

STATEMENT FOR SCHEDULE 2 DURING 1939

SCHEDULE 2 AWARDS

	Awards Not Pensions	Pensions	TOTALS
Municipal Corporations, etc.	$ 75,066.13	$142,038.00	$217,104.13
Steam Railroads	56,146.60	136,688.19	192,834.79
Electric Railways	1,564.45	9,870.95	11,435.40
Navigation Companies	18,550.56	18,136.00	36,686.56
Express and Sleeping Car Companies	1,943.50		1,943.50
Telephone and Telegraph Companies	3,829.61	8,424.00	12,253.61
All Others	112.35	2,345.85	2,458.20
Dominion Crown Cases	132,181.71	138,369.25	270,550.96
Provincial Crown Cases	62,526.72	75,512.40	138,039.12
TOTALS	$351,921.63	$531,384.64	$883,306.27

SCHEDULE 2 FUNDS

Deposits Under Section 28

Cash in bank and invested, Jan. 1, 1939	$3,494,514.01	
Deposits received from employers	177,013.25	
Interest received	167,057.81	
Paid to pensioners		$ 353,685.45
Deposits returned to employers		202,075.63
Cash in bank and invested, Dec. 31, 1939		3,282,823.99
	$3,838,585.07	$3,838,585.07

Claimants' Moneys

Cash in bank and invested, Jan. 1, 1939	$ 14,373.44	
Deposits received from employers	4,075.85	
Interest received	716.68	
Paid to claimants		$ 5,361.54
Cash in bank and invested, Dec. 31, 1939		13,804.43
	$ 19,165.97	$ 19,165.97

Deposits Under Section 32

Cash in bank, Jan. 1, 1939	$ 50,943.22	
Deposits received from employers	748,226.13	
Payments made—Compensation and Medical Aid		$731,236.01
Deposits returned to employers		20,976.23
Cash in bank, December 31, 1939		46,957.11
	$799,169.35	$799,169.35

Reserve for Depreciation of Securities

Cash in bank and invested, Jan. 1, 1939	$184,183.29	
Profit on sale of investments during 1939	22,694.11	
Cash in bank and invested, Dec. 31, 1939		$206,877.40
	$206,877.40	$206,877.40

TOTALS OF FUNDS

Cash in bank and invested, Jan. 1, 1939	$3,744,013.96	
Deposits received from employers	929,315.23	
Interest received	167,774.49	
Profit on sale of investments during 1939	22,694.11	
Payments made		$1,090,283.00
Deposits returned to employers		223,051.86
Cash in bank and invested, Dec. 31, 1939		3,550,462.93
	$4,863,797.79	$4.863,797.79

CHAPTER III

WORK HANDLED DURING 1939

This chapter deals with the work handled during 1939, and with the administration of the Act generally during the year. Particulars are given in Tables 5 to 8.

The figures are for what has been dealt with during 1939 without regard to the year in which the accidents dealt with occurred, while, as explained in Chapter I, the figures in Chapter I and Chapter V are for the accidents happening during the year.

Benefits Awarded During the Year

The total amount of compensation awarded during 1939 was $5,057,714.23, of which $4,174,407.96 was in Schedule 1 industries, $474,716.19 in Schedule 2 industries, and $408,590.08 in Crown cases. There was also paid for medical aid in Schedule 1 industries during the year $1,094,693.30, making the total benefits awarded during the year $6,152,407.53. In Schedule 2 and Crown cases (for the most part) medical aid is provided directly by the employer and no figures are available.

The benefits awarded each year, and the total since the commencement of the Act, are as follows:

Year	Schedule 1		Schedule 2 and Crown	Total
	Compensation	Medical Aid	Compensation	Benefits
1939	$4,174,407.96	$1,094,693.30	$ 883,306.27	$6,152,407.53
1938	4,362,618.00	1,153,894.99	947,748.20	6,464,261.19
1937	3,837,588.62	1,251,848.47	1,040,523.46	6,129,960.55
1936	3,553,282.23	1,058,642.36	1,031,874.20	5,643,798.79
1935	3,225,898.54	1,037,682.86	1,050,531.47	5,314,112.87
1934	2,745,239.16	841,738.41	912,729.66	4,499,707.23
1933	2,298,787.97	667,581.69	732,699.29	3,699,068.95
1932	3,202,639.27	817,240.38	1,105,740.91	5,125,620.56
1931	3,917,045.43	1,060,763.01	1,043,583.66	6,021,392.10
1930	4,942,756.25	1,336,046.05	1,144,216.52	7,423,018.82
1929	5,346,621.19	1,385,524.62	1,280,011.97	8,012,157.78
1928	4,565,688.56	1,166,507.54	1,335,750.83	7,067,946.93
1927	3,930,417.59	1,062,859.64	1,091,377.64	6,084,654.87
1926	3,664,039.94	988,486.70	1,168,825.26	5,821,351.90
1925	3,635,530.27	875,836.01	1,054,077.11	5,565,443.39
1924	4,052,287.77	835,956.60	1,234,575.97	6,122,820.34
1923	4,036,170.26	788,905.90	1,348,785.58	6,173,861.74
1922	3,417,101.61	692,819.94	1,582,975.06	5,692,896.61
1921	3,858,017.50	662,793.89	1,668,452.10	6,189,263.49
1920	5,113,149.77	703,705.66	1,963,389.82	7,780,245.25
1919	2,808,638.65	386,298.51	997,922.77	4,192,859.93
1918	2,751,137.45	369,346.37	763,511.02	3,883,994.84
1917	2,286,954.99	*83,514.07	623,556.37	2,994,025.43
1916	1,553,653.38	†.........	451,709.93	2,005,363.31
1915	692,389.09	†.........	200,932.03	893,321.12
Totals	$87,972,061.45	$20,322,686.97	$26,658,807.10	$134,953,555.52

*Half year only. †No provision for medical aid.

The increase in benefits from the early years is largely by reason of increase in wages, compensation being for the most part a percentage of wages, and additional industries have been covered, and some material changes were made in compensation. The large total for 1920 is by reason of the retroactive increase in widows' and children's pensions, and the small amount awarded during

1915 is by reason of many 1915 accidents not being, nor capable of being, finally disposed of till the following year. The amount of benefits awarded for each year's accidents, as distinguished from the amount awarded during the year, is shown in Chapter V.

Accidents Reported During the Year

During 1939, 60,520 accidents were reported. These included some not serious enough to involve payment of either compensation or medical aid and for which no claim was made, and others for which claims were made but were not allowed by the Board.

At the close of the year there were 1,447 claims in assembly, as compared with 1,183 at the end of 1938, notice of the accident having been given but reports necessary to deal with the case not yet having been received.

The number of accidents reported each year, and the total number since the commencement of the Act, are as follows:

Year	Total
1939	60,520
1938	59,834
1937	70,582
1936	61,382
1935	58,546
1934	54,730
1933	38,042
1932	41,470
1931	52,894
1930	69,267
1929	87,103
1928	79,398
1927	71,979
1926	65,916
1925	60,012
1924	58,675
1923	61,109
1922	50,411
1921	45,191
1920	54,851
1919	44,260
1918	47,848
1917	36,532
1916	26,092
1915	17,033
All Years	1,373,677

Accidents Paid For During the Year

Table 5 shows the number of accidents in which compensation or medical aid was paid during the year. The total number was 54,405, as compared with 51,925 during 1938. The 54,405 comprised 237 deaths, 988 permanent disability cases, 23,213 temporary disability cases, and 29,967 medical aid only cases. Except for Provincial Crown cases, Schedule 2 and Crown cases involving medical aid only, which are a large proportion of the accidents reported, are not included as accidents paid for, as the medical aid is furnished by the employer.

The number of accidents in which compensation or medical aid was awarded each year since the commencement of the Act is as follows:

Year	Schedule 1	Schedule 2	Crown	Totals
1939	50,316	1,700	2,389	54,405
1938	47,816	1,874	2,235	51,925
1937	61,643	1,897	2,828	66,368
1936	51,620	1,828	2,741	56,189
1935	46,960	1,707	5,631	54,298
1934	41,244	1,800	6,258	49,302
1933	29,766	1,487	2,453	33,706
1932	38,469	1,914	3,521	43,904
1931	43,611	2,561	2,710	48,882
1930	56,715	2,723	2,357	61,795
1929	68,195	2,883	2,737	73,815
1928	61,384	2,723	2,425	66,532
1927	55,894	2,741	2,443	61,078
1926	52,199	2,489	2,182	56,870
1925	47,782	2,734	2,217	52,733
1924	46,616	2,820	2,475	51,911
1923	47,873	3,849	1,916	53,638
1922	37,172	4,572	765	42,509
1921	34,271	5,161	834	40,266
1920	42,693	4,444	714	47,851
1919	34,400	4,517	153	39,070
1918	36,565	4,335	30	40,930
*1917	25,277	3,406	19	28,702
*1916	15,370	2,825	3	18,208
*1915	8,328	1,494	7	9,829

*Cases involving medical aid only, not covered till July 1, 1917.

Awards Changed

In addition to claims compensated, as shown in Table 5, the Board in 1939 opened for further award 873 claims which had been settled previously.

Cheques, Assessments, Mail, and Callers

In all, 282,087 cheques were issued during 1939, an average of about 940 daily, and there were 34,925 assessments made, including refunds. About 6,500 pieces of mail were handled daily, and the average number of office callers was 65 a day.

Receipts and Payments

The receipts and payments during the year are shown in Table 6, the statement for Schedule 2 including Crown cases. Explanation of the items and the funds referred to will be found in other parts of the report. A summary of receipts and payments since the commencement of the Act is given in the Appendix.

Payments to Safety Associations

The safety or accident prevention associations are organizations of employers established under the authority of the Act by the employers in 22 out of the 24 classes of industry. They are under the management of the employers but the expenses are paid by the Board out of the Accident Fund.

The total amounts so paid are set out in Table 7, which table also shows the amount paid out on account of mine rescue work in Class 5.

Administration Expenses

The administration expenses of the Board, analyzed under the different headings, are shown in Table 8. The gross administration expenses during 1939 were $481,864.49, which included special statistical and audit services for which refunds have been received of $10,905.00, making the total administration expenses $470,959.49, as compared with $439,015.47 during 1938. The employers pay the whole expense of the administration of the Act. The amount is divided, according to the number of accidents handled, among Schedule 1 (Accident Fund and Silicosis Account), Schedule 2, and Dominion and Provincial Crown.

The amount charged to the Silicosis Account was $18,550.72; to the Rehabilitation Clinic, $1,000; to Mine Rescue Work, $901.36; to Schedule 1 employers, $414,666.41; to Schedule 2, $16,944.00; to Dominion Crown, $12,999.00; and to Provincial Crown, $5,898.00.

The cost of office furniture, fixtures, and equipment, including permanent equipment, has always been charged to administration expenses in the year in which payment therefor was made, and no entry for which has ever been made in the standing of the funds. The value of this furniture and equipment at the present time is estimated at about $30,000.

The total administration expenses for 1939 less expenses of supervising work in connection with silicosis, rehabilitation and mine rescue stations (not properly administrative work) and handling claims for silicosis, were 7.32 per cent. of benefits awarded, being 7.87 per cent. of benefits awarded in Schedule 1, and 4.06 per cent. in Schedule 2 and Crown cases.

A charge was made of $10,705.60 for occupational therapy, there being $11,705.60 less $1,000 received from physiotheraphy clinic. This amount was pro rated among the classes in Schedule 1.

TABLE 5

COMPENSATION, MEDICAL AID, AND ACCIDENTS PAID FOR, DURING 1939

Compensation Awarded during 1939

Schedule 1	$4,174,407.96
Schedule 2	474,716.19
Crown Cases	408,590.08
Total	$5,057,714.23

Medical Aid Paid during 1939

Schedule 1	$1,094,693.30
Schedule 2	furnished by employer
Crown Cases	furnished by employer

Accidents Paid For during 1939

	Medical Aid Only	Temporary Disability	Permanent Disability	Death	TOTALS
SCHEDULE 1—					
Full Compensation	.....	17,320	908	159	18,387
Part Compensation	.....	2,454	...	19	2,473
Medical Aid Only	29,456	.....	...	...	29,456
Totals	29,456	19,774	908	178	50,316
SCHEDULE 2—					
Full Compensation	.....	1,423	50	29	1,502
Part Compensation	.....	194	...	3	197
Medical Aid Only	1	.....	...	...	1
Totals	1	1,617	50	32	1,700
CROWN CASES—					
Full Compensation	.....	1,663	30	24	1,717
Part Compensation	.....	159	...	3	162
Medical Aid Only	510	.....	...	...	510
Totals	510	1,822	30	27	2,389
GRAND TOTALS	29,967	23,213	988	237	54,405

TABLE 6

STATEMENT OF RECEIPTS AND PAYMENTS DURING 1939

Schedule 1

RECEIPTS

Cash in Banks, January 1, 1939:		
Canadian Bank of Commerce.....	$ 1,626.83	
Royal Bank of Canada........	20,291.50	
Dominion Bank...	376,819.49	
		$398,737.82
Net Assessments, Penalties, etc.:		
Gross Assessments.	6,216,945.82	
Under Section 8..	7,647.85	
Under Section 84(4)	1,150.00	
Under Section 107.	3,247.64	
Under Section 114.	404.35	
From D.P. & N.H.	43,003.00	
From Accident Cost Refunds...	4,841.05	
	6,277,239.71	
Less:		
Assessments and Penalties Refunded.........	92,176.09	
		6,185,063.62
Silicosis Assessments...........		497,597.58
Interest:		
From Investments.	1,431,008.38	
Exchange Premium	13,214.82	
From Bank and Short Date Deposits..........	3,406.06	
		1,447,629.26
Investments:		
Principal returned.	529,959.07	
Short Date Deposits..........	500,000.00	
Profit on Sale of Investments....	23,194.48	
		1,053,153.55
From Schedule 2 and Crown Employers for Administrative Expense, account of prior years, paid out of Schedule 1 in 1938..		63,833.15
Special Statistical and Other Services.......................		10,905.00
Rehabilitation Clinic:		
Refunds from Medical Aid....	14,278.92	
Refunds from Schedule 2 Employers........	235.75	
		14,514.67
		$9,671,434.65

PAYMENTS

Compensation paid, other than Pensions and Compensation Deferred..................		$1,742,526.59
Pensions....................		2,286,696.13
Deferred Compensation.......		39,590.94
Rehabilitation...............		11,444.62
Medical Aid.................		1,073,508.45
Silicosis.....................		193,376.24
Under Section 8..............		1,087.40
Mine Rescue Work...........		18,027.11
Administration Expenses......		481,930.63
Safety Associations...........		218,511.25
Rehabilitation Clinic Expenses.		11,768.68
Occupational Therapy........		11,705.60
Investments:		
Permanent Investments...	$2,718,728.34	
Short Date Investments...	350,000.00	
		3,068,728.34
Cash in Banks, December 31, 1939:		
Canadian Bank of Commerce	$ 747.80	
Royal Bank of Canada.....	23,595.37	
Dominion Bank	488,189.50	
		512,532.67
		$9,671,434.65

Table 6—Continued

Schedule 2

RECEIPTS		
Cash in Imperial Bank of Canada, January 1, 1939		$ 76,154.48
Employers' Deposits under Section 28		177,013.25
Employers' Deposits under Section 32		748,226.13
Employers' Deposits of Claimants' Moneys		4,075.85
Interest:		
From Investments	$166,466.33	
Exchange Premium	910.34	
From Bank Deposits	397.82	167,774.49
Investments:		
Principal returned	$428,110.81	
Profit on Sale of Investments	22,694.11	450,804.92
		$1,624,049.12

PAYMENTS		
To Claimants out of Deposits under Section 28		$ 353,685.45
Deposits returned to Employers under Section 28		202,075.63
To Claimants out of Claimants' Moneys		5,361.54
Paid out of Deposits under Section 32:		
Compensation	$ 686,098.16	
Rehabilitation	415.75	
Medical Aid	44,722.10	731,236.01
Deposits returned to Employers under Section 32		20,976.23
Investments		234,447.53
Cash in Imperial Bank of Canada, December 31, 1939		76,266.73
		$1,624,049.12

TABLE 7

PAYMENTS TO SAFETY OR ACCIDENT PREVENTION ASSOCIATIONS, 1939

Association	Class	Total Payments	
Lumbermen's Safety Association	1	$27,701.25	
Ontario Pulp and Paper Makers' Safety Association	2	14,760.00	
Class 5 Accident Prevention Association	5	11,500.00	
Industrial Accident Prevention Associations	3, 4, 6, 7, 8, 9, 10, 11, 12, 14, 15, 16, 17, 18, 19, 230	131,000.00	
Ontario Highway Construction Safety Association	21	7,000.00	
Electrical Employers' Association of Ontario	22	5,550.00	
Construction Safety Association of Ontario	24	21,000.00	
			$218,511.25

MINE RESCUE WORK ACCOUNT (CLASS 5), 1939

Maintenance of Stations, Salaries and Supplies	$18,027.11	
Administrative Supervision	901.36	
		$ 18,928.47

REHABILITATION CLINIC ACCOUNT, 1939

Credit from 1938	$ 3,297.31	
Receipts during the year	14,514.67	
	17,811.98	
Maintenance, Salaries and Supplies	$11,768.68	
Administrative Supervision	1,000.00	
For Occupational Therapy	1,000.00	
	$13,768.68	
Balance, December 31, 1939		$ 4,043.30

OCCUPATIONAL THERAPY ACCOUNT, 1939

Maintenance, Salaries and Supplies	$11,705.60	
Received from Rehabilitation Clinic	1,000.00	
		$ 10,705.60

TABLE 8

ANALYSIS OF ADMINISTRATION EXPENSES DURING 1939

Salaries of Board and Staff	$349,416.15	
Travelling Expenses of Board and Staff	39,117.58	
Printing, Stationery, and Office Supplies	21,253.01	
Postage	27,533.42	
Telephone, Telegraph, and Express	2,139.41	
Legal Expenses, Witness Fees, etc.	2,871.79	
Claimants' Travelling Expenses and Medical Examinations	859.46	
Insurance and Security Service	5,594.49	
Auditor's Services, under instructions of Attorney-General	2,500.00	
Office Rent	18,655.24	
Permanent Equipment	7,091.97	
Miscellaneous Services, Equipment Rental, and Repairs	3,307.97	
Meals for Staff when working overtime (nights, Saturday afternoons, etc.)	1,524.00	
Gross Administration Expenses, 1939	$481,864.49	
Received for Special Statistical and Other Services	10,905.00	
TOTAL ADMINISTRATION EXPENSES		$470,959.49
Charged to Rehabilitation Clinic	$ 1,000.00	
Charged to Silicosis Account	18,550.72	
Charged to Mine Rescue Work	901.36	
Charged to Dominion of Canada	12,999.00	
Charged to Province of Ontario	5,898.00	
Charged to Schedule 2 Employers	16,944.00	
Charged to Schedule 1 Employers	414,666.41	
		$470,959.49

OCCUPATIONAL THERAPY

GROSS EXPENSES, 1939:		
Rent	$ 2,400.00	
Salaries	4,778.42	
Fixtures, Equipment, etc.	394.65	
General Expenses (Meals and Car Fare of Patients, Supplies)	4,132.53	
		$ 11,705.60
Received from Physiotherapy	$ 1,000.00	
Charged to Schedule 1	10,705.60	
		$ 11,705.60

CHAPTER IV

CONDITION OF FUNDS

A general statement of the condition of the funds in Schedule 1 and in Schedule 2 is contained in Table 9, and particulars of the various funds and of the Board's investments are given in Tables 10 to 14. A summary since the commencement of the Act will be found in the Appendix.

Schedule 1 Funds

The Schedule 1 funds are known and referred to as the "Accident Fund". They comprise, in addition to current funds out of which temporary payments of compensation, medical aid and administration expenses are paid, the Pension Fund, Disaster Reserve, and Compensation Deferred. The standing of the Accident Fund, showing assets and liabilities, at December 31, 1939, is shown in Table 9. The balance of assets in excess of liabilities at that date was $3,840, 961.68, being $228,782.11 Disaster Reserve, $2,648,711.01 standing at the credit of the classes December 31, 1939, and $963,468.56 reserve for depreciation of securities. This is exclusive of office equipment and furniture mentioned in Chapter III.

Pension Fund

The Pension Fund, representing the outstanding pension liability, comprises the largest part of the funds standing to the credit of Schedule 1. The purpose of the Pension Fund is to take care of future payments of pensions which have already been awarded. Actuarial tables, embodying the contingencies of death and remarriage, have been compiled to show for each age and kind of pension the average amount (sometimes referred to as capitalized value) necessary to complete pension payments. When a pension is awarded this average amount is transferred from current funds to the Pension Fund. All payments of pensions are made from the Pension Fund. Since the amount transferred in any one instance is the average amount required, no re-transfer is made should a residue be left at the expiry of the pension, nor is any additional transfer made should the amount be exhausted before expiry of the pension.

Particulars of Pension Fund

Table 10 gives particulars of the Pension Fund for each class. The balance in the fund at the commencement of 1939 was $23,647,379.28; $2,280,597.20 was transferred during the year for pension awards; $1,197,594.14 interest was added and $2,286,696.13 was paid for pensions. The balance in the fund at the end of the year was $24,838,874.49.

The transfers for pension awards during the year included $176,411.69 from Silicosis Account to provide for pensions in cases of Silicosis in Class 5.

Disaster Reserve

The Disaster Reserve is a fund set aside under the provisions of Section 101 (2) of the Act to meet any unforeseen disaster or other circumstance which might unduly burden the employers in any class of industry. The fund has been accumulated by a transfer of one per cent. of the gross assessments up to the end of 1922, and for the year 1928. These are the only moneys set aside or held by the Board which do not directly cover liabilities actually incurred by reason of accidents which have already happened.

The standing of the Disaster Reserve is shown in Table 11. The balance at the end of 1939 was $228,782.11; $10,894.38 interest being added to the $217,887.73 in the fund at the beginning of the year. There were no withdrawals during the year.

Reserve for Depreciation of Securities

During 1936 a reserve for depreciation of securities was established. This reserve is made up of profits on the sale of investments and up to 1939 of excess interest not allocated to Pension Fund, Disaster Reserve and Compensation Deferred. Withdrawals are made on refunding debentures to "write up" values to market conditions. At the beginning of 1939 there was $940,274.08 in this reserve. During the year was added $23,194.48 profits on sale of investments during 1939. The balance in the Reserve at December 31, 1939, was $963,468.56.

Compensation Deferred

The funds included under "Compensation Deferred" comprise compensation moneys held at interest for claimants in Schedule 1, payment being deferred to a future time by reason of the claimant being a minor or for other reasons. The condition of the fund is shown in Table 12.

At the beginning of the year the amount on hand was $44,415.34: deferred awards during the year amounted to $55,507.93, and $737.69 interest was added during the year: the payments during the year amounted to $39,710.94, of which $38,827.14 was for principal and $883.80 for interest, leaving a balance of $60,950.02.

A considerable portion of the funds included under "Compensation Deferred" do not bear interest, payment of principal being deferred to the future.

Silicosis Account

Table 13 gives particulars of the Silicosis Account which was established to take care of special assessments and payments in Class 5 necessitated by the addition of "Silicosis" contracted in mining operations to the list of industrial diseases under the Act, by amendment effective April, 8, 1926.

The balance in the account at the beginning of 1939 was $2,220,283.86; $497,597.58 was collected by assessment; $262,089.78 was paid out (or transferred to Pension Fund) for compensation; $21,184.85 for medical aid; $83,244.44 for salaries and expenses in connection with examinations of underground mine-workers; $18,550.72 was transferred to the Accident Fund for the expenses of supervision and handling claims; and $4,495.33 was paid for salaries and expenses of the Referee Board. The surplus in the account December 31, 1939, was $2,328,316.32, against which were liabilities as follows:

Held to meet incurred losses	$1,921,599.40
Held to meet losses and expenses in 1940	641,397.32
Total	$2,562,996.72,

leaving a deficit in the account of $234,680.40, which will be covered by assessment during 1940.

Investments

Particulars of the Board's investments are given in Table 14.

The total invested at the end of the year in Schedule 1 was $34,376,204.27, consisting of $32,337,435.00 value of investments at the beginning of the year, $3,068,728.34 invested during the year, less $1,029,959.07 principal returned.

Particulars of each investment are shown in the list, including kind of investment, particular security, face rate of interest, term, par value, and book value.

With the exception of short-date deposits of current funds intended for use before the current year's assessments are received, all investments consist of Province of Ontario debentures, municipal or municipally-guaranteed debentures, and Dominion of Canada guaranteed bonds.

The average rate of interest received on permanent investments in Schedule 1 during 1939 was approximately 4.38 per cent., as compared with 4.41 per cent. in 1938, and 4.60 per cent. in 1937. A nominal half of one per cent. is received on current bank balances.

Schedule 2 Funds

The funds handled by the Board in respect of Schedule 2 industries include employers' deposits for pensions required to be made with the Board under the provisions of Section 28 of the Act, temporary deposits or advances of money made by employers under Section 32 to facilitate prompt payment of claims, and claimants' moneys held by the Board in cases of awards, payment of which by reason of the claimant being a minor, or for other reason, is deferred to a future time.

The standing of Schedule 2 funds at December 31, 1939, is shown in the latter part of Table 9, and the particulars and a list of Schedule 2 investments are given in Table 14.

At the end of 1939 the deposits held under Section 28 amounted to $3,282,823.99; deposits under Section 32 to $46,957.11; the amount of claimants' moneys held by the Board was $13,804.43; and $206,877.40 reserve for depreciation of securities, making a total of $3,550,462.93, of which $3,474,196.20 was held in permanent investments, and $76,266.73 cash in bank.

The rate of interest distributed to Schedule 2 Funds, not including reserve for depreciation of securities, during 1939 was 4.92 per cent., as compared with 4.92 per cent. distributed during 1938, and 4.74 per cent. during 1937.

Table 9

STANDING SCHEDULE 1 ACCIDENT FUND AS AT DECEMBER 31, 1939

ASSETS		
Cash in Banks:		
Canadian Bank of Commerce	$747.80	
Royal Bank of Canada	23,595.37	
Dominion Bank	488,189.50	$512,532.67
Short Date Deposits		50,000.00
Investments		34,326,204.27
Due for Administrative Expense:		
From Schedule 2 Employers		17,065.48
From Dominion of Canada		12,999.00
From Province of Ontario		5,898.00
From Rehabilitation Clinic		1,000.00
		$34,925,699.42

LIABILITIES		
Compensation Deferred, other than Pensions		$60,950.02
Pension Liability		24,838,874.49
Silicosis Account:		
For Incurred Losses	$1,921,599.40	
For 1940 Losses and Expenses	641,397.32	
Deficit Dec. 31, 1939	—234,680.40	2,328,316.32
Balance at Credit of Rehabilitation Clinic		4,043.30
Compensation and Medical Aid Estimated Outstanding		2,541,949.94
Estimated for Pneumoconiosis		1,189,133.67
Assessments Estimated to be Refunded on Adjustment of 1939 Pay Rolls		121,470.00
Assets in Excess of Liabilities:		
Disaster Reserve	$228,782.11	
Reserve for Depreciation of Securities	963,468.56	
Balance at Credit of Classes (see Table 1)	2,648,711.01	3,840,961.68
		$34,925,699.42

STANDING SCHEDULE 2 FUNDS AS AT DECEMBER 31, 1939

ASSETS	
Cash in Imperial Bank of Canada	$76,266.73
Investments	3,474,196.20
	$3,550,462.93

LIABILITIES	
Balance Employers' Deposits under Section 28	$3,282,823.99
Balance Employers' Deposits under Section 32	46,957.11
Claimants' Moneys held by the Board	13,804.43
Reserve for Depreciation of Securities	206,877.40
	$3,550,462.93

TABLE 10

PENSION FUND, SCHEDULE 1 BY CLASSES, DECEMBER 31, 1939

Class	Balance Forward from 1938	Pension Awards during 1939	Interest Received	Pension Payments	Balance as at Dec. 31, 1939	Class
	$ c.	$ c.	$ c.	$ c.	$ c.	
1	2,110,809.11	223,367.17	107,720.24	192,783.27	2,249,113.25	1
2	1,131,531.80	79,680.44	56,862.75	97,249.45	1,170,825.54	2
3	279,109.09	29,004.89	14,010.24	30,214.58	291,909.64	3
4	695,117.71	37,179.75	34,289.17	73,366.84	693,219.79	4
5	4,089,474.45	*730,388.54	215,164.30	417,317.56	4,617,709.73	5
6	941,788.22	63,964.60	46,880.35	95,780.85	956,852.32	6
7	584,757.40	30,292.90	28,870.87	60,761.09	583,160.08	7
8	464,758.65	34,855.04	23,357.46	41,108.24	481,862.91	8
9	936,617.60	51,002.54	46,338.80	93,260.71	940,698.23	9
10	1,216,924.97	70,851.40	60,693.18	103,240.48	1,245,229.07	10
11	949,660.52	70,982.16	47,672.70	88,463.79	979,851.59	11
12	726,013.05	20,573.67	35,406.16	74,411.32	707,581.56	12
13	520,507.69	22,928.13	25,842.06	42,623.28	526,654.60	13
14	246,995.50	10,525.19	12,083.98	26,368.61	243,236.06	14
15	955,207.19	121,378.36	48,957.43	97,297.99	1,028,244.99	15
16	553,967.33	39,945.66	27,906.30	47,210.82	574,608.47	16
17	461,732.61	44,664.50	23,455.58	42,531.15	487,321.54	17
18	202,211.92	25,927.82	10,409.68	20,525.93	218,023.49	18
19	315,553.68	37,064.16	16,199.91	28,708.32	340,109.43	19
20	888,983.71	142,885.09	46,468.21	85,623.58	992,713.43	20
21	1,139,168.30	124,736.41	58,242.42	108,697.03	1,213,450.10	21
22	479,531.29	56,810.11	24,339.03	54,272.03	506,408.40	22
23	1,257,648.08	18,939.09	61,376.25	110,926.00	1,227,037.42	23
24	2,499,309.41	192,649.58	125,047.07	253,953.21	2,563,052.85	24
	23,647,379.28	2,280,597.20	1,197,594.14	2,286,696.13	24,838,874.49	

Transferred Within the Fund:

Class 20 to 23	$ 257.00
Class 21 to 5	508.00
Class 21 to 10	3,998.10
Class 24 to 15	162.00

*Transferred from Silicosis Account, Class 5—$176,411.69

TABLE 11

DISASTER RESERVE, DECEMBER 31, 1939

Balance in Fund as at December 31, 1938	$217,887.73
Interest credited in 1939	10,894.38
Balance as at December 31, 1939	$228,782.11

RESERVE FOR DEPRECIATION OF SECURITIES

Balance in Fund as at December 31, 1938	$940,274.08
Profit on Sale of Investments during 1939	23,194.48
Balance as at December 31, 1939	$963,468.56

TABLE 12

COMPENSATION DEFERRED, DECEMBER 31, 1939

Balance in Fund, December 31, 1938		$ 44,415.34
Compensation awarded, payment deferred, during 1939		55,507.93
Interest credited in 1939		737.69
		$100,660.96
Paid claimants during 1939:		
Principal	$38,827.14	
Interest	883.80	
		39,710.94
Balance as at December 31, 1939		$ 60,950.02

TABLE 13

SILICOSIS ACCOUNT, DECEMBER 31, 1939

Balance in Fund, December 31, 1938		$2,220,283.86
Assessments collected under Class 5		497,597.58
		$2,717,881.44
Payments made:		
Compensation	$262,089.78	
Medical Aid	21,184.85	
Salaries and Expenses	83,244.44	
To Accident Fund for supervision and handling claims	18,550.72	
Salaries and Expenses of Referee Board	4,495.33	
		389,565.12
Balance as at December 31, 1939		$2,328,316.32

TABLE 14

INVESTMENTS, DECEMBER 31, 1939

Schedule 1

Book Value of Investments, January 1, 1939	$32,337,435.00
Invested during the year	3,068,728.34
	$35,406,163.34
Less Principal returned	1,029,959.07
BOOK VALUE OF INVESTMENTS, DECEMBER 31, 1939	$34,376,204.27

Schedule 2

Book Value of Investments, January 1, 1939	$3,667,859.48
Invested during the year	234,447.53
	$3,902,307.01
Less Principal returned	428,110.81
BOOK VALUE OF INVESTMENTS, DECEMBER 31, 1939	$3,474,196.20

TABLE 14—Continued

LIST OF INVESTMENTS

SCHEDULE 1 FUNDS

Municipal Debentures

Security	Face Rate	Term	Par Value $ c.	Book Value $ c.
Belleville:	5½%	May 1, 1952	120,000.00	122,179.56
	4½%	1943-1954	156,000.00	150,131.91
	5%	1947–1949	20,000.00	19,596.71
	5%	1946–1960	147,388.05	138,592.88
	5%	1946–1950	17,856.38	16,943.35
	5%	1945–1959	24,545.76	23,090.82
Bowmanville	5%	1945–1949	41,035.25	40,324.47
Brampton	4½%	1940–1944	978.05	953.29
Brantford:	4½%	Dec. 31, 1942	10,000.00	9,529.51
	6%	1940–1947	38,600.00	38,636.00
	5%	1940–1949	53,000.00	51,718.83
	5½%	1941–1953	13,000.00	13,451.01
	4%	Dec. 31, 1950	5,000.00	4,580.86
	5%	Dec. 15, 1963	50,000.00	59,834.23
Bridgeburg	5½%	1950–1956	13,403.01	14,214.36
Burlington	5%	1942–1951	10,843.18	10,980.08
Capreol	6%	1951–1958	18,000.00	18,368.72
Carleton Place	5½%	1940–1941	3,994.78	3,994.78
Collingwood (guaranteed by County of Simcoe)	5%	1947–1951	191,000.00	183,423.80
Dundas	5½%	1940–1946	9,773.44	9,806.72
East York:	5%	1940–1965	172,187.29	163,064.13
	5%	1940–1965	72,105.65	68,301.81
Essex, Village of	5%	1933–1934	1,266.00	1,256.46
Etobicoke:	5½%	1946–1949	45,000.00	46,491.84
	5%	1940–1957	25,277.74	25,351.06
	5%	1941–1957	71,000.00	69,954.81
	5%	1940–1958	28,416.47	28,506.11
	5%	1940–1948	66,071.95	62,663.22
	4½%	1948–1962	7,000.00	7,000.00
	4½%	1940–1963	29,902.43	29,902.43
Fort Erie:	5½%	1945–1961	50,715.22	53,540.64
	5½%	1944–1961	23,621.00	24,736.19
Fort William:	5%	Feb. 1, 1944	25,000.00	24,269.64
	6%	May 1, 1950	10,000.00	9,696.08
	5%	April 1, 1955	55,000.00	54,276.04
	5%	1946 & 1951	69,924.85	70,365.58
	5%	July 1, 1952	34,672.60	34,962.00
	5%	July 1, 1947	42,751.00	42,990.51
	5%	Jan. 1, 1957	30,000.00	31,045.56
	5%	April 1, 1959	76,000.00	75,342.75
Fort William (Guaranteeing McKellar Hospital)	4½%	May 1, 1948	88,000.00	87,233.99
Forest Hill Village:	5%	1943–1957	44,730.93	44,589.92
	5%	1945–1959	101,281.75	95,753.94
Galt:	5, 5½ & 6%	Dec. 6, 1961	19,284.69	18,549.88
	5½%	Dec. 1, 1962	68,400.36	71,134.98
	6%	Dec. 1, 1962	14,135.90	15,642.91
	5½%	Dec. 15, 1964	14,097.18	15,202.22
	5½%	July 2, 1965	35,254.75	37,515.56
Glencoe	5½%	April 1, 1940	1,427.76	1,410.61
Guelph:	5½%	1940–1944	13,287.11	13,122.32
	4%	Dec. 31, 1953	46,441.00	41,149.69

TABLE 14—Continued

Municipal Debentures—Continued

Security	Face Rate	Term	Par Value	Book Value
			$ c.	$ c.
Hamilton:	5%	1944–1945	21,000.00	20,325.56
	4½%	1944–1945	37,000.00	35,167.64
	4½%	Mar. 1, 1947	10,000.00	9,690.47
	5%	1947–1949	54,000.00	53,764.40
	5%	1947–1949	104,000.00	103,546.97
	5%	1947–1949	6,000.00	5,974.20
	5%	1947–1949	2,000.00	1,991.40
	4½%	1946–1948	19,000.00	18,327.77
	4½%	1946–1949	42,000.00	40,501.32
	4½%	1946–1948	47,000.00	45,352.32
	4½%	1946–1948	55,000.00	52,967.63
	4½%	1946–1948	32,000.00	30,816.03
	4½%	1946–1948	9,000.00	8,668.12
	4½%	1946–1948	16,000.00	15,408.09
	4½%	1946–1949	82,000.00	78,963.86
	4½%	1946–1949	51,000.00	49,110.00
	5%	Jan. 2, 1945	43,000.00	42,902.13
	5%	Feb. 1, 1945	26,000.00	25,940.68
	5%	April 1, 1945	16,000.00	15,963.55
	5%	June 1, 1945	55,000.00	54,874.82
	5%	May 1, 1945	32,000.00	31,927.15
	6%	1943–1952	170,000.00	169,860.35
	6%	April 1, 1950	26,000.00	26,921.08
	6%	April 1, 1952	17,000.00	17,654.44
	4½%	Feb. 1, 1945	50,000.00	48,694.59
	5%	1959–1963	50,000.00	50,329.08
	5%	April 1, 1945	3,000.00	2,971.50
	4½%	Feb. 1, 1944	4,000.00	3,888.80
	5%	1950 & 1951	28,000.00	27,560.59
	5%	1952 & 1953	100,000.00	98,279.77
	5%	April 1, 1951	22,000.00	21,650.54
Hanover	5½%	1945–1959	65,703.97	66,777.86
Hawkesbury	6%	1933–1940	51,432.34	48,982.22
Kenora	5%	1940–1956	44,500.00	43,449.72
Kingston:	6%	1940–1948	2,500.00	2,491.81
	6%	1943–1945	16,300.00	16,228.94
Kingsville	6½, 4½%	1942–1956	24,361.18	24,361.18
Kitchener:	5½%	1940–1946	510.78	506.32
	5½%	1946–1951	28,160.08	28,665.63
	5½%	1946–1952	18,281.49	18,620.96
Leaside:	5½%	1940–1949	73,000.00	71,225.11
	4½%	1940–1957	28,921.32	28,921.32
	4½%	1949–1959	54,296.74	54,089.00
La Salle	.....	....	2,279.90	2,279.90
Listowel	5½%	1940–1947	8,716.72	8,586.94
London	5%	1946–1950	58,000.00	58,693.00
Midland (Guaranteed by County of Simcoe:	5½–4½%	1961–1969	14,339.86	14,339.86
	5½–4½%	1961–1967	10,720.05	10,720.05
	5 –4½%	1961–1969	36,422.68	36,422.68
	5 –4½%	1960–1973	47,160.21	47,160.21
Mimico:	5½–4½%	1942–1968	62,940.45	62,940.45
	5½–4½%	1942–1968	43,174.68	43,174.68
	5 –4½%	1942–1965	36,525.33	36,525.33
Mount Forest	5%	1945–1948	26,183.59	25,863.92
Napanee	5%	1941–1943	14,623.28	14,691.80
New Toronto:	3%	1945–1952	40,000.00	38,408.00
	3%	1945–1952	40,000.00	37,641.50

Table 14—Continued

Municipal Debentures—Continued

Security	Face Rate	Term	Par Value	Book Value
			$ c.	$ c.
Niagara Falls:	5%	1940–1945	35,548.31	34,107.25
	6%	1940–1941	17,582.78	17,460.16
	5½%	1940–1953	54,098.50	54,728.53
	5%	1940–1952	14,033.76	13,776.68
	3½%	1945–1949	23,000.00	23,008.82
North Bay:	5%	1940–1942	813.06	815.69
	6%	1940–1942	41,463.20	41,689.55
	5%	1940–1947	31,063.73	31,380.05
	4½%	1940–1943	10,689.54	10,627.34
	5½%	1940–1948	140,536.15	143,081.61
Northumberland and Durham, United Counties of	5%	1941–1948	27,358.70	27,010.48
North York, Twp.:	5½%	1940–1941	8,500.00	8,553.69
	5½%	1940–1944	17,866.71	18,129.86
	5½%	1940–1943	25,811.14	26,130.70
	5½%	1943–1957	36,885.12	38,638.89
	5½%	1940–1958	24,469.63	25,700.21
	5%	1940–1948	47,687.13	48,167.51
	4½%	1944–1952	8,000.00	8,000.00
Orillia (Guaranteed by County of Simcoe)	5%	1941–1954	17,156.14	17,212.50
Oshawa:	6%	1945–1951	45,133.48	43,959.40
	5%	1940–1943	64,000.00	63,520.20
	5½%	1945–1949	100,000.00	99,037.30
Ottawa:	6%	July 1, 1951	15,000.00	16,369.79
	5½%	1951–1961	226,000.00	225,628.08
	5½%	July 1, 1961	114,000.00	113,429.56
	5½%	July 1, 1961	46,000.00	45,867.09
	5½%	July 1, 1961	10,000.00	12,739.48
Parry Sound:	6%	1940–1944	3,301.79	3,264.58
	6%	1940–1950	42,972.95	40,566.88
Pembroke	5–4½%	1956–1961	75,025.53	75,025.53
Perth:	5%	1944–1948	55,000.00	55,682.10
	5%	1945–1950	21,000.00	20,867.02
Peterborough	4½%	June 30, 1951	50,000.00	44,406.76
Port Arthur:	5%	June 1, 1959	50,000.00	48,785.04
	5½%	June 1, 1948	53,000.00	49,962.02
Port Arthur (Guaranteeing General Hospital:	5½%	Nov. 1, 1955	100,000.00	104,057.51
	5½%	Oct. 1, 1954	40,000.00	41,450.55
Renfrew:	6%	1940–1947	4,202.73	4,229.08
	5%	1947–1958	55,034.42	55,312.61
Richmond Hill	5½%	1940–1944	2,938.21	2,938.21
Riverside	.....	....	6,399.65	6,399.65
St. Marys:	5%	Oct. 31, 1943	4,870.30	4,791.23
	5%	Jan. 1, 1944	2,500.00	2,455.93
St. Thomas	6%	1949–1951	44,646.39	43,378.73
Sandwich East, Twp.	....	....	5,399.71	5,399.71
Sandwich West, Twp.:	....	....	7,539.62	7,539.62
	6%	1938–1948	80,272.18	85,913.94
Sarnia	5%	1942–1947	62,914.68	62,254.41
Sault Ste. Marie:	6%	Mar. 23, 1949	24,771.50	25,709.94
	5½%	April 1, 1950	43,000.00	41,921.28
	5½%	Jan. 20, 1943	6,000.00	6,114.73
	5½%	Jan. 20, 1943	4,000.00	4,047.24
	5½%	1940–1942	15,000.00	15,053.03
	5%	June 1, 1949	3,900.00	3,827.79
	5½%	Dec. 15, 1949	5,000.00	5,099.90

Table 14—Continued

Municipal Debentures—Continued

Security	Face Rate	Term	Par Value	Book Value
			$ c.	$ c.
Scarborough, Twp:	5%	1940–1943	25,000.00	25,515.23
	5%	1942–1958	75,474.03	72,308.64
	5%	1938–1940	1,689.23	1,634.40
Simcoe, Town of	6%	1940–1945	2,965.07	3,010.55
Sioux Lookout	6%	1944–1947	4,000.00	4,000.00
Smith's Falls:	5½%	1940–1944	1,853.22	1,853.22
	6%	1940–1946	7,705.55	7,844.27
	5½%	1940–1947	6,792.74	6,716.00
	5½%	1940–1945	64,306.49	64,265.04
	5%	1944–1946	54,000.00	54,000.00
Stratford:	5%	Jan. 1, 1945	25,000.00	24,465.74
	5%	Jan. 1, 1945	15,000.00	14,680.17
	5%	Jan. 1, 1945	10,000.00	9,786.29
	5%	Jan. 1, 1945	2,000.00	2,007.38
	5%	Jan. 1, 1945	13,000.00	12,646.08
	6%	Jan. 1, 1951	40,000.00	39,203.53
	5½%	Jan. 1, 1942	50,000.00	50,095.40
	5½%	Jan. 1, 1952	13,000.00	13,107.96
	5%	June 15, 1955	30,000.00	30,167.25
Sudbury:	5%	1940–1949	49,943.48	48,795.34
	5%	1945–1948	66,235.66	66,022.60
	3%	1950–1954	69,052.75	66,165.54
	3%	1945–1949	29,565.51	28,532.80
Thorold	5%	Aug. 15, 1958	3,000.00	2,945.55
Tillsonburg:	5½%	Mar. 20, 1945	975.00	975.00
	5½%	1940–1944	440.72	440.72
Timmins:	4%	1940–1949	85,000.00	86,593.51
	4%	1940–1949	30,329.20	31,104.17
Toronto:	4½%	July 1, 1948	4,000.00	3,588.23
	4½%	Jan. 1, 1955	19,000.00	16,172.83
	5½%	1945–1947	11,000.00	10,705.22
	6%	1943–1951	48,000.00	48,000.00
	5½%	1940–1951	41,000.00	41,511.22
	6%	1945–1951	9,000.00	9,550.11
	5%	July 1, 1950	20,000.00	20,122.22
	5%	April 1, 1950	25,000.00	25,152.75
	4½%	June 1, 1946	7,000.00	6,826.72
	4½%	May 1, 1945	2,000.00	1,957.12
	4½%	1944–1948	26,000.00	25,430.52
	5%	1947–1951	61,000.00	61,227.72
	5½%	Mar. 1, 1949	2,000.00	2,090.28
	6%	June 1, 1950	10,000.00	10,963.42
	5½%	1946–1958	53,000.00	53,719.51
	5½%	April 1, 1957	25,000.00	24,586.61
	5½%	1944–1947	35,000.00	34,674.58
	5½%	1958–1962	125,000.00	123,202.18
	5½%	1943–1944	17,000.00	16,877.65
	5½%	1945–1952	27,000.00	26,047.18
	5%	July 1, 1946	30,000.00	29,979.06
	5½%	April 1, 1952	5,000.00	5,183.15
	5½%	1950–1951	15,000.00	15,531.78
	5½%	April 1, 1951	11,000.00	11,427.79
	6%	1946–1951	20,000.00	21,436.07
	4½%	Aug. 1, 1951	28,000.00	26,169.02
	6%	July 1, 1951	10,000.00	10,023.23
	3½%	Dec. 1, 1962	54,000.00	54,844.45
Toronto Harbour Commission (Guaranteed by City of Toronto)	4½%	Sept. 1, 1953	14,000.00	13,164.05
Toronto, Twp.	5½%	1941–1952	18,104.29	18,778.28
Trenton	5½%	1942–1943	25,000.00	25,401.31
Welland, County	5%	Dec. 15, 1945	10,000.00	9,810.41
Weston	6%	1949–1952	24,949.65	27,099.11

Table 14—Continued

Municipal Debentures—Continued

Security	Face Rate	Term	Par Value	Book Value
			$ c.	$ c.
West Gwillimbury (Guaranteed by County of Simcoe)	5½%	1942–1956	36,107.36	36,217.11
Whitby:	5½%	1940–1946	6,045.19	6,072.33
	5½%	1940–1946	2,189.70	2,200.36
	5½%	1940–1946	2,737.15	2,762.15
Windsor:	4%	Dec. 31, 1975	162,300.66	171,336.05
	4%	Dec. 31, 1975	145,738.15	151,271.58
	4%	Dec. 31, 1975	25,000.00	25,049.88
	4%	Jan. 1, 1948	698.72	698.72
	3¼%	Dec. 31, 1975	604,238.79	573,455.46
	3¼%	Dec. 31, 1975	110,000.00	104,398.20
	3¼%	Jan. 1, 1948	634.38	634.38
	2%	Dec. 31, 1975	145,737.13	101,189.81
	2%	Dec. 31, 1975	18,000.00	12,498.11
	2%	Jan. 1, 1948	679.06	679.06
	1½%	Dec. 31, 1975	598,654.36	354,663.65
	1½%	Dec. 31, 1975	15,000.00	8,886.53
	1½%	Jan. 1, 1948	819.22	819.22
York, Twp.:	5%	1941–1946	100,000.00	100,298.01
	6%	1941–1951	102,407.13	105,792.73
	5%	1949–1956	225,000.00	214,721.81
	5%	1942–1946	195,000.00	195,313.67
	5%	1945–1955	22,000.00	22,000.00
	5%	Feb. 1, 1952	25,000.00	25,437.71
	5½%	1941–1949	20,731.26	21,845.28
	6%	1941–1952	8,679.27	9,515.22
	6%	1941–1952	27,659.28	30,387.50
	5%	1945–1958	74,000.00	73,284.00
	5%	1945–1956	110,295.98	103,061.14
York Twp. (Guaranteed by County of York):	5%	1941–1956	93,000.00	89,321.09
	5%	1946–1957	21,000.00	21,095.81
			10,985,850.50	10,587,406.18

Other Permanent Investments

Security	Face Rate	Term	Par Value	Book Value
			$ c.	$ c.
Canadian National Railways (Guaranteed by Dominion of Canada):	5%	Feb. 1, 1954	100,000.00	103,776.21
	5%	Feb. 1, 1954	50,000.00	51,830.96
	5%	Feb. 1, 1954	80,000.00	77,490.42
	5%	Feb. 1, 1954	36,000.00	34,740.18
	5%	Feb. 1, 1954	121,000.00	118,217.04
	5%	Feb. 1, 1954	247,000.00	242,248.88
	5%	Feb. 1, 1954	50,000.00	51,617.27
	5%	Feb. 1, 1954	23,000.00	23,758.23
	5%	Feb. 1, 1954	50,000.00	51,830.96
	5%	Feb. 1, 1954	50,000.00	51,691.85
	5%	Feb. 1, 1954	60,000.00	62,030.22
	5%	Feb. 1, 1954	25,000.00	25,871.81
	5%	Feb. 1, 1954	90,000.00	93,061.73
	5%	Feb. 1, 1954	463,000.00	454,087.41
	5%	Feb. 1, 1954	40,000.00	35,804.98
	5%	Feb. 1, 1954	115,000.00	131,323.37
	5%	Feb. 1, 1954	43,000.00	49,148.68
	5%	Feb. 1, 1954	100,000.00	114,928.88
	5%	Feb. 1, 1954	40,000.00	46,139.29
	5%	Feb. 1, 1954	25,000.00	28,171.86

Table 14—Continued

Other Permanent Investments—Continued

Security	Face Rate	Term	Par Value $ c.	Book Value $ c.
Canadian National Railways (Guaranteed by Dominion of Canada):	5%	Feb. 1, 1954	50,000.00	56,326.13
	5%	Feb. 1, 1954	25,000.00	28,059.78
	5%	Feb. 1, 1954	90,000.00	102,211.08
	5%	Feb. 1, 1954	50,000.00	57,721.20
	5%	Feb. 1, 1954	50,000.00	57,807.03
	5%	Feb. 1, 1954	40,000.00	46,173.64
	5%	Feb. 1, 1954	32,000.00	36,938.95
	5%	Feb. 1, 1954	46,000.00	54,140.82
	5%	Feb. 1, 1954	50,000.00	58,473.11
	5%	Feb. 1, 1954	50,000.00	58,783.98
	5%	Feb. 1, 1954	25,000.00	28,720.89
	5%	Feb. 1, 1954	25,000.00	29,019.97
	4¾%	June 15, 1955	22,000.00	25,055.99
	4¾%	June 15, 1955	24,000.00	27,738.39
	4½%	July 1, 1957	100,000.00	110,203.24
	4½%	July 1, 1957	75,000.00	82,491.33
	4½%	July 1, 1957	100,000.00	110,203.18
	4½%	July 1, 1957	100,000.00	110,095.78
	4½%	July 1, 1957	100,000.00	110,310.58
	4½%	July 1, 1957	250,000.00	276,312.75
	4½%	July 1, 1957	60,000.00	66,508.06
	4½%	July 1, 1957	100,000.00	111,275.37
	4½%	July 1, 1957	120,000.00	134,200.87
	4½%	July 1, 1957	65,000.00	72,607.13
	4½%	July 1, 1957	75,000.00	83,056.12
	4½%	July 1, 1957	244,000.00	272,872.99
	4½%	July 1, 1957	52,000.00	58,759.93
	4½%	July 1, 1957	100,000.00	114,418.80
	4½%	July 1, 1957	117,000.00	132,523.09
	4½%	July 1, 1957	25,000.00	28,517.73
	4½%	July 1, 1957	30,000.00	33,458.00
	4½%	July 1, 1957	15,000.00	16,479.31
	4½%	July 1, 1957	50,000.00	56,029.53
	4½%	July 1, 1957	25,000.00	28,070.16
	4½%	July 1, 1957	50,000.00	55,803.81
	4½%	July 1, 1957	32,000.00	35,714.42
	4½%	July 1, 1957	23,000.00	25,773.67
	4½%	July 1, 1957	40,000.00	45,049.25
	4½%	July 1, 1957	50,000.00	57,184.93
	4½%	July 1, 1957	50,000.00	56,809.44
	4½%	July 1, 1957	50,000.00	56,854.22
	4½%	July 1, 1957	35,000.00	39,865.21
	4½%	July 1, 1957	50,000.00	56,854.22
	4½%	July 1, 1957	50,000.00	56,950.31
Dominion of Canada:	4½%	Nov. 1, 1948/58	465,000.00	491,533.00
	4½%	Nov. 1, 1948/58	30,000.00	32,060.27
	4½%	Nov. 1, 1948/58	100,000.00	107,210.36
	4½%	Nov. 1, 1948/58	50,000.00	53,696.29
	4½%	Nov. 1, 1948/58	200,000.00	214,712.00
	4½%	Nov. 1, 1948/58	23,000.00	24,647.91
	4½%	Nov. 1, 1949/59	100,000.00	107,818.50
	4½%	Nov. 1, 1949/59	135,000.00	149,596.72
	4½%	Nov. 1, 1949/59	59,000.00	65,519.44
	4½%	Nov. 1, 1949/59	185,000.00	202,487.57
Province of Ontario:	5½%	July 1, 1946	250,000.00	242,049.23
	5½%	July 1, 1946	100,000.00	97,397.91
	5½%	July 1, 1946	115,000.00	114,226.39
	5½%	July 1, 1946	15,000.00	16,276.70
	5½%	July 1, 1946	200,000.00	216,706.45
	5½%	July 1, 1946	25,000.00	27,094.54
	5½%	July 1, 1946	461,000.00	449,062.11
	5½%	July 1, 1946	34,000.00	37,148.16

Table 14—Continued

Other Permanent Investments—Continued

Security	Face Rate	Term	Par Value	Book Value
			$ c.	$ c.
Province of Ontario:	3¼%	Nov. 1, 1947	100,000.00	99,500.00
	4½%	Dec. 1, 1947	13,000.00	12,271.22
	5½%	Feb. 1, 1947	125,000.00	121,191.70
	5½%	Feb. 1, 1947	226,000.00	226,529.73
	5½%	Feb. 1, 1947	145,000.00	145,910.44
	5½%	Feb. 1, 1947	116,000.00	116,512.94
	5½%	Feb. 1, 1947	10,000.00	9,775.14
	5½%	Feb. 1, 1947	100,000.00	99,731.87
	5½%	Feb. 1, 1947	10,000.00	10,935.24
	5½%	Feb. 1, 1947	62,000.00	67,898.87
	5½%	Feb. 1, 1947	35,000.00	38,288.33
	5½%	Feb. 1, 1947	91,500.00	94,430.35
	5½%	Feb. 1, 1947	50,000.00	52,838.38
	5½%	Feb. 1, 1947	150,000.00	165,476.04
	5½%	Feb. 1, 1947	25,000.00	27,494.04
	5½%	Feb. 1, 1947	60,000.00	68,053.12
	5½%	Feb. 1, 1947	25,000.00	28,362.53
	5½%	Feb. 1, 1947	44,000.00	49,918.20
	5½%	Feb. 1, 1947	25,000.00	28,359.14
	5½%	Feb. 1, 1947	20,000.00	22,144.98
	5%	Oct. 15, 1948	250,000.00	246,840.20
	5%	Oct. 15, 1948	50,000.00	50,454.25
	5%	Oct. 15, 1948	60,000.00	60,541.14
	5%	Oct. 15, 1948	25,000.00	25,252.64
	5%	Oct. 15, 1948	50,000.00	50,451.25
	5%	Oct. 15, 1948	50,000.00	50,802.08
	5%	Oct. 15, 1948	50,000.00	49,160.81
	5%	Oct. 15, 1948	50,000.00	55,747.05
	5%	Oct. 15, 1948	79,000.00	88,003.56
	5%	Oct. 15, 1948	50,000.00	54,898.62
	5%	Oct. 15, 1948	25,000.00	27,567.79
	5%	Oct. 15, 1948	50,000.00	56,066.43
	5%	Oct. 15, 1948	50,000.00	56,159.65
	4½%	Jan. 16, 1949	207,000.00	190,748.60
	4½%	Jan. 16, 1949	158,000.00	146,174.49
	4½%	Jan. 16, 1949	25,000.00	26,157.79
	4½%	Jan. 16, 1949	83,000.00	79,904.10
	4½%	Jan. 16, 1949	74,000.00	78,648.21
	4½%	Jan. 16, 1949	30,000.00	31,945.89
	4½%	Dec. 1, 1949	300,000.00	278,062.07
	3%	Dec. 15, 1949	50,000.00	47,098.99
	4½%	June 1, 1950	50,000.00	52,346.46
	4½%	June 1, 1950	290,000.00	315,291.32
	4½%	June 1, 1950	100,000.00	106,956.27
	4½%	June 1, 1950	135,000.00	144,326.34
	4½%	June 1, 1950	40,000.00	42,733.63
	4½%	June 1, 1950	35,000.00	37,747.37
	4½%	Nov. 1, 1950	10,000.00	10,811.55
	4½%	Dec. 1, 1950	700,000.00	645,556.96
	3¼%	Nov. 15, 1951	25,000.00	23,304.75
	3¼%	Nov. 15, 1951	25,000.00	24,564.26
	3¼%	Nov. 15, 1951	70,000.00	69,153.46
	3%	Jan. 15, 1952	46,000.00	43,239.46
	3%	Jan. 15, 1952	50,000.00	46,492.47
	5%	April 1, 1952	100,000.00	114,601.08
	5%	April 1, 1952	42,000.00	48,334.21
	5%	April 1, 1952	15,000.00	16,857.46
	3½%	Dec. 1, 1951	100,000.00	99,874.66
	3½%	Dec. 1, 1951	28,000.00	27,967.59
	4½%	Dec. 1, 1953	5,000.00	5,491.59
	4½%	May 15, 1954	10,000.00	10,827.71
	3%	June 1, 1954	50,000.00	46,100.91
	3%	Jan. 15, 1955	50,000.00	46,459.12
	3%	Jan. 15, 1955	12,000.00	11,115.97

Table 14—Continued

Other Permanent Investments—Continued

Security	Face Rate	Term	Par Value	Book Value
			$ c.	$ c.
Province of Ontario:	4½%	Jan. 15, 1955	15,000.00	16,674.36
	4½%	1955–1959	12,000.00	12,748.16
	4½%	Jan. 15, 1956	500,000.00	479,652.17
	4%	May 15, 1957	100,000.00	105,160.20
	4½%	May 15, 1957	10,000.00	11,023.87
	4½%	1957–1970	25,000.00	28,638.86
	3%	Jan. 15, 1958	500,000.00	497,721.83
	3%	Jan. 15, 1959	500,000.00	497,708.24
	4½%	Jan. 15, 1959	20,000.00	22,712.65
	4½%	Jan. 15, 1959	30,000.00	32,874.22
	5%	May 1, 1959	250,000.00	249,498.08
	5%	May 1, 1959	100,000.00	118,517.99
	5%	May 1, 1959	50,000.00	59,594.17
	5%	May 1, 1959	20,000.00	24,213.89
	5%	May 1, 1959	41,000.00	48,962.27
	5%	May 1, 1959	64,000.00	76,428.90
	5%	May 1, 1959	20,000.00	23,803.27
	5%	May 1, 1959	25,000.00	29,873.78
	5%	May 1, 1959	25,000.00	30,266.79
	5%	May 1, 1959	28,000.00	34,348.65
	5%	May 1, 1959	50,000.00	61,165.31
	5%	May 1, 1959	25,000.00	30,432.97
	5%	May 1, 1959	50,000.00	61,336.18
	5%	May 1, 1959	30,000.00	36,278.16
	5%	May 1, 1959	14,000.00	15,841.54
	4½%	1959–1961	18,000.00	20,538.62
	4½%	1959–1965	45,000.00	50,506.23
	4%	1960–1966	44,000.00	45,559.57
	4%	1960–1968	156,000.00	167,728.33
	4%	1960–1971	318,000.00	342,771.81
	4½%	1960–1965	42,000.00	47,781.50
	5%	Dec. 2, 1960	30,000.00	35,106.86
	5%	Dec. 2, 1960	18,000.00	21,981.08
	5%	Dec. 2, 1960	25,000.00	29,946.49
	5%	Dec. 2, 1960	126,000.00	151,317.51
	5%	Dec. 2, 1960	25,000.00	30,543.96
	5%	Dec. 2, 1960	32,000.00	38,405.99
	5%	Dec. 2, 1960	25,000.00	30,668.46
	5%	Dec. 2, 1960	41,000.00	50,633.24
	5%	Dec. 2, 1960	61,000.00	74,526.61
	5%	Dec. 2, 1960	25,000.00	30,543.95
	5%	Dec. 2, 1960	100,000.00	123,876.30
	4½%	Jan. 15, 1961	50,000.00	57,922.28
	4½%	Jan. 15, 1961	50,000.00	57,923.67
	4½%	Jan. 15, 1961	20,000.00	23,003.98
	4½%	May 15, 1961	29,000.00	33,195.19
	4½%	May 15, 1961	25,000.00	28,432.91
	4%	1961–1967	20,000.00	21,503.94
	4½%	1961–1967	9,000.00	9,709.66
	4½%	Jan. 15, 1962	75,000.00	87,251.20
	4%	May 15, 1962	50,000.00	52,740.38
	4½%	May 15, 1962	25,000.00	28,990.15
	4%	1962–1968	6,000.00	6,383.27
	4%	1962–1970	106,000.00	112,743.42
	4%	1962–1967	296,000.00	314,807.56
	4½%	1962–1971	23,000.00	26,820.94
	4%	1963–1964	40,000.00	41,464.44
	4½%	1963–1968	12,000.00	13,124.36
	4½%	Jan. 15, 1963	125,000.00	143,995.34
	4½%	Jan. 15, 1963	89,000.00	103,010.68
	4½%	Jan. 15, 1963	75,000.00	86,293.57
	4%	June 1, 1963	32,000.00	32,988.86
	4½%	Jan. 15, 1965	75,000.00	87,228.12
	4½%	Jan. 15, 1965	19,000.00	21,977.46

Table 14—Continued

Other Permanent Investments—Continued

Security	Face Rate	Term	Par Value	Book Value
			$ c.	$ c.
Province of Ontario:	4½%	Jan. 15, 1965	36,000.00	41,858.02
	4½%	Jan. 15, 1965	25,000.00	29,104.13
	4½%	Jan .15, 1965	25,000.00	29,195.41
	4½%	May 15, 1965	50,000.00	58,114.38
	4%	June 1, 1965	20,000.00	21,385.37
	4½%	1965–1969	78,000.00	91,711.81
	4½%	1965–1970	65,000.00	75,845.58
	4½%	May 15, 1967	25,000.00	27,517.07
	4%	June 1, 1967	100,000.00	107,471.71
	4%	May 15, 1968	40,000.00	42,252.20
	4½%	May 15, 1968	50,000.00	58,341.98
	4½%	Jan. 15, 1968	100,000.00	117,942.97
	4%	June 1, 1968	10,000.00	10,000.00
	4½%	Jan. 15, 1969	100,000.00	117,360.32
	4½%	May 15, 1969	75,000.00	87,960.52
	4½%	Jan. 15, 1970	101,000.00	118,785.56
	4½%	Jan. 15, 1970	25,000.00	27,821.33
	4½%	Jan. 15, 1970	100,000.00	115,945.53
	4½%	Jan. 15, 1970	25,000.00	29,301.42
	4½%	Jan. 15, 1970	20,000.00	23,457.93
	4½%	May 15, 1970	10,000.00	11,791.86
	4%	June 1, 1970	25,000.00	27,173.07
	4½%	Jan. 15, 1971	25,000.00	28,319.12
	4½%	Jan. 15, 1971	25,000.00	27,647.70
	4%	June 1, 1971	25,000.00	27,886.95
Province of Ontario guaranteed:				
Englehart, Town of	6%	1945–1954	20,388.11	21,386.65
Hydro-Electric Power Comm'n.:	5%	July 1, 1945	78,000.00	73,275.90
	5%	July 15, 1946	50,000.00	47,466.46
	5%	July 15, 1946	50,000.00	46,781.89
	4%	Aug. 1, 1957	15,000.00	15,487.09
	4%	Aug. 1, 1957	25,000.00	25,811.78
	4%	Aug. 1, 1957	20,000.00	21,347.05
	4%	Aug. 1, 1957	55,000.00	57,994.64
	4½%	April 1, 1960	20,000.00	21,382.14
	4½%	April 1, 1960	50,000.00	53,455.20
	4½%	April 1, 1960	24,000.00	26,009.59
	4½%	April 1, 1960	22,000.00	23,990.41
	4½%	April 1, 1960	22,000.00	24,852.87
	4½%	April 1, 1960	131,000.00	147,994.47
	4½%	April 1, 1960	25,000.00	28,243.22
	4½%	April 1, 1960	81,000.00	92,649.17
	6%	July 1, 1961	120,000.00	154,388.88
	6%	July 1, 1961	25,000.00	32,811.63
	6%	July 1, 1961	100,000.00	126,560.30
	4¾%	Jan. 1, 1970	25,000.00	22,770.72
	4¾%	Jan. 1, 1970	41,000.00	45,819.45
	4¾%	Jan. 1, 1970	46,000.00	51,514.66
	4¾%	Jan. 1, 1970	154,000.00	172,587.44
	4¾%	Jan. 1, 1970	105,000.00	125,226.86
	4¾%	Jan. 1, 1970	13,000.00	15,452.58
	4¾%	Jan. 1, 1970	50,000.00	58,092.78
	4¾%	Jan. 1, 1970	57,000.00	68,153.29
	4¾%	Jan. 1, 1970	66,000.00	78,991.16
	4¾%	Jan. 1, 1970	50,000.00	59,841.87
	4¾%	Jan. 1, 1970	33,000.00	39,649.63
	4¾%	Jan. 1, 1970	75,000.00	89,969.84
	4¾%	Jan. 1, 1970	38,500.00	46,256.87
	4¾%	Jan. 1, 1970	10,000.00	11,723.39
	4¾%	Jan. 1, 1970	49,000.00	57,486.11
	4¾%	Jan. 1, 1970	100,000.00	117,230.95
	4¾%	Jan. 1, 1970	63,000.00	74,299.27
	4¾%	Jan. 1, 1970	95,000.00	91,323.89
	4¾%	Jan. 1, 1970	60,000.00	68,971.02

Table 14—Continued

Other Permanent Investments—Continued

Security	Face Rate	Term	Par Value	Book Value
			$ c.	$ c.
Province of Ontario guaranteed:				
Hydro-Electric Power Comm'n.:	4¾%	Jan. 1, 1970	18,500.00	21,077.87
	4¾%	Jan. 1, 1970	35,000.00	39,895.27
	4¾%	Jan. 1, 1970	100,000.00	116,900.60
	4¾%	Jan. 1, 1970	50,000.00	58,390.49
	4¾%	Jan. 1, 1970	125,000.00	145,976.23
	4¾%	Jan. 1, 1970	50,000.00	58,152.28
	4¾%	Jan. 1, 1970	38,000.00	43,969.17
	4¾%	Jan. 1, 1970	16,000.00	19,029.11
Sandwich, Windsor & Amherstburg Railway:	4½%	June 1, 1943	49,000.00	47,045.12
	4½%	June 1, 1943	25,000.00	25,609.68
Sturgeon Falls	6%	1946–1952	40,092.65	49,423.60
Temiskaming & Northern Ontario Railway:	4%	1951–1952	269,000.00	274,807.31
	4%	1953–1957	160,000.00	168,722.49
	4%	1954–1959	69,000.00	70,667.34
	4%	Feb. 1, 1956	70,000.00	72,902.77
	4%	Feb. 1, 1959	145,000.00	123,762.47
	4%	1958–1967	112,000.00	118,349.10
Province of Ontario guaranteed:				
Temiskaming & Northern Ontario Railway:	4%	1960–1965	31,000.00	32,630.30
	4%	Feb. 1, 1963	33,000.00	34,703.43
	4%	1965–1966	16,000.00	17,475.50
	4%	Feb. 1, 1966	100,000.00	108,897.68
	4%	Feb. 1, 1967	100,000.00	105,508.07
	4%	Feb. 1, 1967	35,000.00	38,074.36
	4%	1967–1968	55,000.00	58,060.22
Tisdale, Twp.:	6%	1943–1944	14,226.05	14,960.85
	6%	1943–1944	6,713.43	7,060.70
			22,245,920.24	23,738,798.09
TOTAL PERMANENT INVESTMENTS, SCHEDULE 1			33,231,770.74	34,326,204.27

Table 14—Continued

SCHEDULE 2 FUNDS

Municipal Debentures

Security	Face Rate	Term	Par Value	Book Value
			$ c.	$ c.
Barton, Twp.	5½%	July 14, 1952	63,000.00	63,855.82
Belleville:	5%	1943–1945	3,450.26	3,359.73
	5%	1943–1950	8,000.00	7,707.63
	5%	1940–1946	10,488.47	10,252.07
Brantford	4%	Dec. 31, 1949	15,000.00	13,374.78
Chippawa, Town (Guaranteed by County of Welland)	5½%	1941–1944	22,578.30	22,558.41
Cornwall	5½%	1941–1943	10,248.45	10,233.19
Etobicoke, Twp.:	5%	1941–1955	24,867.79	24,044.01
	5%	1941–1956	32,574.89	32,453.11
	5½%	1942–1956	58,470.29	60,289.90
	5%	1948–1955	43,000.00	41,085.36
Galt	5%	Dec. 15, 1965	19,460.45	18,532.56
Hamilton:	4½%	1945–1946	65,000.00	61,080.48
	4½%	1945–1946	57,000.00	54,006.24
	5%	1942–1946	35,000.00	34,364.41
	4½%	May 1, 1961	10,000.00	11,394.94
Kingston	5%	July 1, 1955	70,000.00	66,708.73
Kitchener	6%	1944–1947	10,418.06	10,721.05
London:	5%	Dec. 30, 1954	411,000.00	392,469.01
	5%	1945–1956	194,000.00	189,684.53
	5%	1943–1955	63,000.00	62,085.98
North Bay	5½%	1940–1943	33,000.00	32,748.91
Peterborough	5%	Dec. 31, 1945	20,000.00	19,487.66
Renfrew, Town	5½%	1949–1953	50,234.63	50,681.11
Stamford, Twp.	5½%	1941–1954	246,628.19	247,368.52
Stratford:	5.30%	July 1, 1954	82,000.00	82,822.40
	5%	1940–1956	122,613.19	119,392.96
Thorold, Town	5%	1940–1959	49,546.82	46,910.51
Toronto:	5%	1950–1951	50,000.00	48,945.20
	4½%	Jan. 1, 1949	5,000.00	4,648.41
	5%	July 1, 1950	4,000.00	3,859.75
Victoria, County	5%	1951–1959	17,954.20	16,979.81
Waterloo, Town	5½%	1941–1947	19,193.72	19,065.32
York, Twp.	5%	1944–1961	214,197.93	198,768.86
			2,140,927.64	2,081,941.36

Table 14—Continued

SCHEDULE 2 FUNDS

Other Permanent Investments

Security	Face Rate	Term	Par Value	Book Value
			$ c.	$ c.
Canadian National Railways (Guaranteed by Dominion of Canada):	5%	Feb. 1, 1954	50,000.00	46,996.30
	5%	Feb. 1, 1954	50,000.00	57,720.68
	4½%	July 1, 1957	60,000.00	67,370.82
Dominion of Canada:	4½%	Nov. 1, 1948/58	50,000.00	53,433.98
	4½%	Nov. 1, 1949/59	377,000.00	416,959.37
Hydro-Electric Power Commission (Guaranteed by Province of Ontario):	4½%	April 1, 1960	50,000.00	55,713.93
	6%	July 1, 1961	28,000.00	35,312.47
	4¾%	Jan. 1, 1970	63,000.00	73,572.09
Province of Ontario:	5%	Oct. 1, 1942	31,000.00	30,562.40
	5½%	Feb. 1, 1947	40,000.00	45,380.04
	5%	Oct. 15, 1948	50,000.00	50,452.45
	5%	April 1, 1952	19,000.00	18,359.89
	5%	May 1, 1959	25,000.00	30,522.62
	5%	May 1, 1959	25,000.00	30,282.39
	4½%	1959–1970	30,000.00	34,751.75
	5%	Dec. 2, 1960	100,000.00	120,395.34
	4%	June 1, 1966	100,000.00	109,502.18
	4½%	1966–1968	15,000.00	17,204.07
	4½%	May 15, 1970	7,000.00	7,996.07
	4%	1970–1971	20,000.00	21,689.30
	4%	June 1, 1971	30,000.00	32,250.59
Temiskaming & Northern Ontario Railway (Guaranteed by Province of Ontario)	4%	1960–1966	35,000.00	35,826.11
			1,255,000.00	1,392,254.84
TOTAL PERMANENT INVESTMENTS, SCHEDULE 2			3,395,927.64	3,474,196.20

SHORT DATE DEPOSIT, SCHEDULE 1

Security	Face Rate	Term	Par Value	Book Value
Huron & Erie Mortgage Corp'n.	2%		$50,000.00	

CHAPTER V

1938 OPERATIONS

This chapter deals with the year 1938, containing information which was not available when the report for that year was made.

It gives the final financial statement for Schedule 1 industries for the year, estimates of the adjustments of assessments and of the outstanding compensation and medical aid having to be used in the provisional statement given in Table 1 of the 1938 report; and it gives statistical information as to the accidents which happened during 1938, their causes, the nature of the injuries suffered, the number, time loss, total and average cost of the different classes of cases, and the age, wage, nationality, and marital condition of the injured workmen.

This information is contained in Tables 15 to 26.

Final Financial Statement, Schedule 1, 1938

Table 15 gives the final financial statement for Schedule 1 industries for 1938, provisional figures for which were given in Table 1 of the 1938 report. It shows the income and credits and the expenditures and charges and the balance for each class of industry; also the actual assessments and accident cost and other items of income and expenditure for each class, and the assessments and accident cost for each group of industry within the class. The list of industries included in each class and group will be found in the Board's rate book, the list of industries in the different classes is also printed with the Act, and their general nature is indicated at the bottom of Table 1 of this report.

The net income and credits for all the classes for the year were $6,341,560.92, and the net expenditure and charges $5,906,976.19, leaving a surplus for the year of $434,584.73. Adding the surplus forward for prior years of $3,209,014.24, leaves a net actual surplus of $3,643,598.97, as compared with a provisional or estimated surplus of $2,621,717.55, the disparity being largely due to claims for accidents occurring in 1938 and prior years not being finally disposed of in 1939.

Assessments and Accident Cost

The assessments and accident cost (the latter comprising compensation and medical aid and payments on account of rehabilitation but not including payments from the Silicosis Account) in Schedule 1 for each year since the commencement of the Act, and the totals to the end of 1938, are as follows:

Year	Assessments	Accident Cost
1915	$1,831,537.52	$1,091,020.43
1916	2,361,463.20	1,880,004.37
1917	2,662,383.29	2,639,560.56
1918	3,303,575.83	3,214,427.57
1919	3,840,949.07	4,474,847.38
1920	5,579,333.45	5,041,947.30
1921	4,594,452.37	4,277,034.67
1922	3,984,594.64	4,323,801.07
1923	3,771,321.09	4,977,331.82
1924	4,524,700.86	4,746,314.60
1925	4,390,854.75	4,438,802.13
1926	5,167,126.64	4,711,970.90
1927	5,465,763.17	5,082,073.61
1928	6,739,696.80	6,083,772.14
1929	7,505,431.10	6,861,274.51

Year	Assessments	Accident Cost
1930	6,396,105.73	5,925,502.17
1931	4,608,677.15	4,472,209.18
1932	3,292,309.25	3,177,386.47
1933	2,729,936 41	2,795,085.82
1934	4,192,200.35	3,904,134.13
1935	5,254,667.17	4,386,477.31
1936	6,075,763.79	4,543,669.26
1937	5,728,493.82	5,321,732.42
1938	6,303,914.88	5,331,350.47
Totals	$110,305,252.33	$103,701,730.29

Pay Roll and Rates of Assessment

As assessments are in the form of a percentage of pay roll, the average rate paid by the employers in Schedule 1 can be determined by dividing the total assessments for the year by the total pay roll. The following table shows the total amount of pay roll and the total assessments and the average rate for $100 pay roll for each year:

Year	Total Pay Roll	Total Assessments	Average Rate per $100
1915	$147,603,000	$1,831,537.52	$1.24
1916	220,840,000	2,361,463.20	1.07
1917	286,903,000	2,662,383.29	.93
1918	310,450,000	3,303,575.83	1.06
1919	325,226,000	3,840,949.07	1.18
1920	464,589,000	5,579,333.45	1.20
1921	355,259,000	4,594,452.37	1.29
1922	391,888,000	3,984,594.64	1.02
1923	434,163,000	3,771,321.09	.87
1924	386,318,000	4,524,700.86	1.17
1925	390,652,000	4,390,854.75	1.04
1926	424,926,000	5,167,126.64	1.22
1927	455,016,000	5,465,763.17	1.20
1928	504,102,000	6,739,696.80	1.34
1929	559,429,000	7,505,431.10	1.34
1930	472,742,000	6,396,105.73	1.35
1931	389,740,000	4,608,677.15	1.18
1932	317,605,000	3,292,309.25	1.04
1933	288,917,000	2,729,936.41	.94
1934	346,735,000	4,192,200.35	1.21
1935	386,782,000	5,254,667.17	1.36
1936	410,792,000	6,075,763.79	1.48
1937	517,621,000	5,728,493.82	*1.11
1938	481,215,000	6,303,914.88	1.31

*The decrease in rate for 1937 was due to refund of penalty assessments under a differential rating plan in force during 1936 and 1937 and abrogated during 1938.

Final Accident Figures, 1938

Table 16 shows the number of accidents happening in 1938 (in all industries under the Act) for which payment of compensation or medical aid was made. The total number was 52,272, of which 276 were death cases, 936 involved some degree of permanent disability, 21,501 temporary disability cases, and 29,559 cases which involved medical aid only. Ordinarily Schedule 2 cases involving medical aid only are not included, as in these cases medical aid is furnished directly by the employer.

The complete figures for each year since the commencement of the Act are as follows:

Year	Medical Aid Only	Temporary Disability	Permanent Disability	Death	Totals
1915............	*.....	9,311	1,339	296	10,946
1916............	*.....	15,993	2,232	373	18,598
1917............	† 4,267	21,556	2,475	370	28,668
1918............	12,822	24,089	2,624	366	39,901
1919............	11,769	22,418	2,457	364	37,008
1920............	15,566	27,423	2,735	373	46,097
1921............	12,141	22,855	2,079	331	37,406
1922............	15,913	24,461	2,082	325	42,781
1923............	20,125	28,954	2,340	327	51,746
1924............	20,811	25,980	2,191	315	49,297
1925............	22,444	26,040	2,157	264	50,905
1926............	25,330	27,150	2,421	308	55,209
1927............	27,852	28,836	2,476	311	59,475
1928............	31,688	30,440	2,926	414	65,468
1929............	34,582	32,920	3,372	417	71,291
1930............	29,189	25,613	3,147	394	58,343
1931............	21,970	20,543	2,495	231	45,239
1932............	17,320	15,466	1,805	167	34,758
1933............	17,258	14,235	1,511	159	33,163
1934............	24,552	22,020	1,790	211	48,573
1935............	27,904	23,024	992	208	52,128
1936............	30,086	22,954	835	272	54,147
1937............	34,318	26,427	1,049	248	62,042
1938............	29,559	21,501	936	276	52,272
Totals........	487,466	560,209	50,466	7,320	1,105,461

*No Medical Aid. †Half Year Only.

Accident Frequencies, Schedule 1

Comparison of accident frequencies can be made by correlating the number of accidents with the total number of full-year workers, data for this being available, however, only in Schedule 1. Eliminating accidents in which medical aid only was paid, the number of accidents for each 100 full-year workers for the different years are:

Year	Temporary Disability	Permanent Disability	Death	Totals
1915.........	3.63	.58	.12	4.32
1916.........	4.99	.79	.10	5.88
1917.........	5.78	.72	.07	6.57
1918.........	5.81	.66	.07	6.54
1919.........	5.81	.68	.07	6.56
1920.........	6.23	.67	.07	6.97
1921.........	6.25	.60	.05	6.90
1922.........	5.82	.52	.06	6.40
1923.........	6.02	.51	.05	6.58
1924.........	6.08	.54	.06	6.68
1925.........	5.94	.51	.05	6.50
1926.........	5.84	.54	.05	6.43
1927.........	5.94	.53	.05	6.52
1928.........	5.85	.58	.07	6.50
1929.........	5.80	.61	.06	6.47
1930.........	5.08	.66	.07	5.81
1931.........	4.28	.56	.04	4.88
1932.........	3.59	.45	.03	4.07
1933.........	3.22	.37	.03	3.62
1934.........	3.94	.37	.04	4.35
1935.........	4.18	.19	.04	4.41
1936.........	4.31	.16	.04	4.51
1937.........	4.47	.18	.04	4.69
1938.........	3.75	.17	.05	3.97

On the same basis of calculation, the frequency of medical aid only cases has been: 1918, 3.66; 1919, 3.70; 1920, 4.26; 1921, 4.24; 1922, 4.67; 1923, 4.96; 1924, 5.84; 1925, 6.09; 1926, 6.37; 1927, 6.73; 1928, 7.09; 1929, 7.06; 1930, 6.84; 1931, 5.72; 1932, 5.06; 1933, 4.94; 1934, 5.65; 1935, 6.16; 1936, 6.55; 1937, 6.63; 1938, 5.97.

Statistical Distributions

Tables 17 to 26 give statistical details regarding accidents and workmen, including, where the data is available, Schedule 2 and Crown cases as well as Schedule 1. Considerations of space preclude more extensive tabulations, but the original material is retained and still fuller information is always available concerning the accidents in any of the different classes of industry.

Month of Occurrence

Table 17 gives the month of occurrence of all accidents. The month in which the greatest number of accidents occurred during 1938 was August, with 4,935, and the month with the lowest number was April, with 3,608.

Accidents According to Locality

The distribution of accidents according to the county or district in which they occurred is contained in Table 18. York had the highest number with 12,422, and next in order were: Temiskaming-Cochrane, with 5,508; Wentworth, with 2,958; Thunder Bay, with 2,787; and Essex with 2,543. The greatest number of deaths (41) were in Temiskaming-Cochrane; there were 32 in York; 29 in Sudbury; 24 in Thunder Bay; and 11 in Wentworth.

Time Loss, Age, and Wage

In Table 19 are given the average age and wage of workmen receiving compensation and the total and average time loss for each class of industry, and for each category of disability. The average age for 1938 was 36.32 years. The average wage for 1938 was $19.84, as compared with $19.97 for 1937, and $18.82 for 1936. The total time loss in temporary disability cases was 581,926 days, or an average of 27.07 days, as compared with an average of 27.25 days in 1937 and 27.52 days in 1936.

Compensation and Medical Aid Costs, Schedule 1

Table 20 contains the total and average cost of compensation and medical aid by classes in Schedule 1 for each kind of disability.

The total cost of all accidents was $5,331,350.47, of which $4,233,204.55 was for compensation (including payments for rehabilitation but not for silicosis cases) and $1,098,145.92 for medical aid (except in silicosis cases).

Of the $4,233,204.55 compensation cost, $1,596,642.02 was for temporary disability cases, $1,715,119.70 was for permanent disability cases, and $921,442.83 was for death cases.

The average cost of temporary disability cases was $125.74, of which $87.36 was for compensation and $38.38 was for medical aid, the average in 1937 being $113.34.

The average cost of permanent disability cases was $2,251.96, of which $405.29 was for temporary disability, $1,610.12 was for permanent disability, and $236.55 was for medical aid.

The average cost of death cases, where there were dependants, was $4,452.17, and the average cost of all death cases was $4,265.53, of which $42.74 was for temporary disability, $122.72 for burial expenses, $4,003.96 for death benefits, and $96.11 for medical aid.

The average cost of all cases in which compensation was paid was $266.54, of which $218.79 was for compensation, and $47.75 was for medical aid, as compared with $213.65 for 1937 and $213.81 for 1936.

The average cost of medical aid in medical aid only cases was $5.99, as compared with $5.76 in 1937 and $5.93 in 1936.

Allegiance of Injured

Table 21 shows the allegiance of injured workers who received compensation, as taken from their own reports. There were 20,623, or nearly 91 per cent. of British allegiance, and 2,090 of foreign allegiance. Among the aliens the most numerous were: Finns, Poles, Russians, Italians, and Jugo-Slavs.

Sex and Marital Condition of Injured

Table 22 gives the sex and marital condition of those receiving compensation. There were 22,279 males and 434 females. Of the males, 13,150 were married and 101 of the females. There were 423 widowers and 21 widows.

Duration of Disability

Table 23 shows the week of termination of temporary disability cases. In nearly 41 per cent. of the cases the disability terminated in from one to two weeks. In 45 cases the disability lasted for more than a year.

Nature of Injuries

The first part of Table 24 shows the number of various kinds of temporary disability injuries in the different classes of industry; the second part gives an analysis of the permanent disability cases, showing the number of injuries to the several parts of the body and the percentage of impairment of earning capacity; and the third part of the table shows the number and nature of the industrial disease cases.

In 1938, there were 6,480 cuts, lacerations, and punctures; 3,983 bruises, contusions and abrasions; 3,422 fractures; 3,593 sprains, strains, twistings and wrenchings; 1,420 crushes; 853 scalds and burns; 626 injuries to eyes; 190 dislocations; and 384 herniae.

Among the 936 permanent disability cases were 19 permanent total disability cases, and 348 exceeded ten per cent. of working capacity.

There were 41 industrial disease cases, of which 14 involved medical aid only; 18 were temporary disability cases; 2 were permanent disability cases; and 7 were death cases. Included in these totals are 17 cases of lead poisoning, 22 cases of silicosis and pneumoconiosis, and 2 cases of chrome poisoning.

Causes of Accidents

Table 25 gives the prime causes of accidents in 1938. Machinery was responsible for 11,530 out of a total of 52,272, or over 22 per cent. of all cases, as compared with 18 per cent. in 1937, and 17 per cent. in 1936.

Death Cases

The nature of awards, the number, relationship, and residence of dependants, are shown in Table 26.

TABLE 15

FINAL FINANCIAL STATEMENT FOR 1938, SCHEDULE 1

By Classes

Class	Income and Credits	Expenditure and Charges	Balance for 1938	Balance Forward Prior Years	Balance at Dec. 31, 1938	Class
	$ c.	$ c.	$ c.	$ c.	$ c.	
1	704,677.83	640,043.27	64,634.56	−69,236.09	−4,601.53	1
2	276,425.80	298,755.62	−22,329.82	171,377.36	149,047.54	2
3	56,417.80	55,054.76	1,363.04	10,828.08	12,191.12	3
4	156,751.15	138,306.95	18,444.20	−25,348.89	−6,904.69	4
5	894,848.39	**1,140,402.73	−245,554.34	982,205.08	736,650.74	5
6	150,381.47	147,735.61	2,645.86	98,988.99	101,634.85	6
7	82,234.01	93,796.70	−11,562.69	116,664.01	105,101.32	7
8	186,592.54	139,029.27	47,563.27	143,448.46	191,011.73	8
9	167,123.17	161,979.29	5,143.88	232,043.01	237,186.89	9
10	345,325.58	291,140.35	54,185.23	197,742.04	251,927.27	10
11	323,338.97	239,479.85	83,859.12	156,829.61	240,688.73	11
12	191,269.52	121,772.21	69,497.31	177,119.72	246,617.03	12
13	83,023.09	90,635.61	−7,612.52	15,661.55	8,049.03	13
14	73,423.84	56,797.06	16,626.78	15,630.85	32,257.63	14
15	348,633.49	301,078.93	47,554.56	13,435.09	60,989.65	15
16	88,011.21	81,641.98	6,369.23	88,520.05	94,889.28	16
17	97,232.87	85,245.11	11,987.76	30,927.80	42,915.56	17
18	57,749.86	77,313.43	−19,563.57	60,026.33	40,462.76	18
19	75,407.66	95,590.43	−20,182.77	35,915.80	15,733.03	19
20	325,024.70	328,740.22	−3,715.52	70,264.98	66,549.46	20
21	503,665.64	399,197.70	104,467.94	128,822.67	233,290.61	21
22	256,714.78	181,346.73	75,368.05	102,126.57	177,494.62	22
23	104,059.54	137,713.32	−33,653.78	320,451.25	286,797.47	23
24	793,228.01	604,179.06	189,048.95	134,569.92	323,618.87	24
	6,341,560.92	*5,906,976.19	434,584.73	3,209,014.24	3,643,598.97	

**Includes $18,849.08 for Mine Rescue Work.

*Includes $10,721.57 for Rehabilitation.

TABLE 15—Continued

By Groups

Group and Class	Assessments and Compensation		Other Credits and Charges			
	Assessments	Compensation and Medical Aid	Sections 8, 107, 114 (3), Etc.	Administrative and Safety Association Costs	Balance Forward Prior Years	Balance at December 31, 1938
	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
Group 010	532,029.95	418,480.34				
" 011	43,770.51	99,453.64				
" 013	123,763.20	56,091.18				
Class 1	699,563.66	574,025.16	5,114.17	66,018.11	−69,236.09	−4,601.53
Group 020	150,557.35	217,620.91				
" 022	125,535.77	47,439.52				
Class 2	276,093.12	265,060.43	332.68	33,695.19	171,377.36	149,047.54
Group 030	56,378.30	48,287.46				
Class 3	56,378.30	48,287.46	39.50	6,767.30	10,828.08	12,191.12
Group 040	137,846.37	100,658.35				
" 042	18,589.01	19,359.09				
Class 4	156,435.38	120,017.44	315.77	18,289.51	−25,348.89	−6,904.69
Group 051	649,569.28	847,731.60				
" 052	177,855.01	179,125.02				
" 055	29,214.91	17,234.97				
" 056	32,333.25	11,267.36				
" 057	4,367.38	555.27				
Class 5	893,339.83	1,055,914.22	1,508.56	84,488.51	982,205.08	736,650.74
Group 060	14,320.77	24,129.03				
" 061	37,091.44	20,585.32				
" 062	8,626.95	15,592.08				
" 063	23,207.79	23,438.06				
" 064	19,356.29	8,045.27				
" 065	21,981.69	30,580.16				
" 066	25,565.01	5,098.03				
Class 6	150,149.94	127,467.95	231.53	20,267.66	98,988.99	101,634.85
Group 070	82,234.01	83,360.60				
Class 7	82,234.01	83,360.60	....	10,436.10	116,664.01	105,101.32
Group 080	88,406.33	57,088.75				
" 082	79,087.15	34,310.61				
" 083	18,272.55	29,311.91				
Class 8	185,766.03	120,711.27	826.51	18,318.00	143,448.46	191,011.73
Group 090	39,066.85	29,912.90				
" 091	25,006.03	33,259.19				
" 092	14,385.50	2,983.12				
" 094	74,289.11	71,309.37				
" 095	12,588.68	6,795.50				
Class 9	165,336.17	144,260.08	1,787.00	17,719.21	232,043.01	237,186.89

TABLE 15—Continued

By Groups

Group and Class	Assessments and Compensation		Other Credits and Charges			
	Assessments	Compensation and Medical Aid	Sections 8, 107, 114 (3), Etc.	Administrative and Safety Association Costs	Balance Forward Prior Years	Balance at December 31, 1938
	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
Group 100	99,575.67	66,440.16				
" 101	82,305.51	65,552.24				
" 102	39,166.98	16,289.23				
" 103	35,154.47	18,197.43				
" 104	22,501.20	32,888.40				
" 105	16,715.05	21,152.23				
" 106	40,328.50	29,321.12				
" 107	8,959.56	3,174.66				
Class 10	344,706.94	253,015.47	618.64	38,124.88	197,742.04	251,927.27
Group 110	74,886.43	46,988.75				
" 111	215,038.04	140,998.99				
" 113	32,872.93	20,866.82				
Class 11	322,797.40	208,854.56	541.57	30,625.29	156,829.61	240,688.73
Group 120	55,037.33	22,618.40				
" 121	49,431.25	36,607.06				
" 122	40,708.01	17,983.39				
" 123	13,346.68	729.65				
" 124	28,884.42	24,268.89				
Class 12	187,407.69	102,207.39	3,861.83	19,564.82	177,119.72	246,617.03
Group 130	55,075.09	61,343.00				
" 131	25,929.04	24,565.02				
Class 13	81,004.13	85,908.02	2,018.96	4,727.59	15,661.55	8,049.03
Group 140	72,854.36	48,757.97				
Class 14	72,854.36	48,757.97	569.48	8,039.09	15,630.85	32,257.63
Group 150	102,855.79	112,217.21				
" 151	74,105.59	46,036.14				
" 152	26,816.29	22,607.38				
" 153	39,768.34	39,676.82				
" 154	31,136.48	6,103.05				
" 155	60,406.97	34,534.55				
" 156	8,525.47	5,353.25				
Class 15	343,614.93	266,528.40	5,018.56	34,550.53	13,435.09	60,989.65
Group 160	24,908.81	15,790.28				
" 161	11,848.05	17,340.19				
" 162	9,115.49	4,082.76				
" 163	41,818.22	35,613.14				
Class 16	87,690.57	72,826.37	320.64	8,815.61	88,520.05	94,889.28
Group 170	47,023.38	39,666.72				
" 171	34,961.04	21,953.48				
" 172	15,059.07	13,916.41				
Class 17	97,043.49	75,536.61	189.38	9,708.50	30,927.80	42,915.56

TABLE 15—Continued

By Groups

Group and Class	Assessments and Compensation		Other Credits and Charges			
	Assessments	Compensation and Medical Aid	Sections 8, 107, 114 (3), Etc.	Administrative and Safety Association Costs	Balance Forward Prior Years	Balance at December 31, 1938
	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
Group 180	29,375.71	30,727.05				
" 181	26,644.04	40,025.39				
Class 18	56,019.75	70,752.44	1,730.11	6,560.99	60,026.33	40,462.76
Group 190	23,067.85	33,000.78				
" 191	52,156.32	53,614.00				
Class 19	75,224.17	86,614.78	183.49	8,975.65	35,915.80	15,733.03
Group 200	216,663.69	211,730.18				
" 201	102,986.32	97,804.94				
Class 20	319,650.01	309,535.12	5,374.69	19,205.10	70,264.98	66,549.46
Group 210	466,945.04	351,140.15				
" 211	34,887.85	21,166.85				
Class 21	501,832.89	372,307.00	1,832.75	26,890.70	128,822.67	233,290.61
Group 220	47,177.08	31,984.65				
" 221	33,758.88	30,493.06				
" 222	67,414.64	34,812.66				
" 223	107,355.54	65,242.74				
Class 22	255,706.14	162,533.11	1,008.64	18,813.62	102,126.57	177,494.62
Group 230	39,518.79	49,180.21				
" 231	38,315.68	44,248.14				
" 232	25,822.30	34,261.33				
Class 23	103,656.77	127,689.68	402.77	10,023.64	320,451.25	286,797.47
Group 240	520,690.82	357,340.24				
" 241	19,461.77	10,197.87				
" 243	27,084.23	20,552.01				
" 244	72,556.72	44,582.37				
" 245	67,425.61	55,381.59				
" 246	47,647.81	43,550.88				
" 247	25,750.55	14,061.73				
" 249	8,791.69	3,512.25				
Class 24	789,409.20	549,178.94	3,818.81	55,000.12	134,569.92	323,618.87
Schedule 1	6,303,914.88	*5,331,350.47	37,646.04	**575,625.72	3,209,014.24	3,643,598.97

*Includes $10,721.57 for Rehabilitation.

**Includes $18,849.08 for Mine Rescue Work.

TABLE 16

NUMBER OF ACCIDENTS IN 1938 INVOLVING PAYMENT

Class	Medical Aid Only	Temporary Disability	Permanent Disability	Death	TOTALS
1	717	2,800	118	25	3,660
2	1,212	1,268	35	10	2,525
3	447	259	23	1	730
4	715	488	38	4	1,245
5	2,434	2,025	119	63	4,641
6	494	342	18	4	858
7	488	133	14	3	638
8	909	340	8	4	1,261
9	1,545	455	27	6	2,033
10	3,499	982	73	6	4,560
11	3,782	809	49	6	4,646
12	939	425	17	5	1,386
13	293	236	12	..	541
14	567	166	8	4	745
15	2,340	1,237	38	8	3,623
16	587	208	17	1	813
17	724	361	23	1	1,109
18	712	359	10	2	1,083
19	826	339	19	..	1,184
20	934	1,061	34	12	2,041
21	1,399	1,461	44	16	2,920
22	1,249	772	20	11	2,052
23	374	262	13	7	656
24	1,912	1,488	74	22	3,496
Totals	29,098	18,276	851	221	48,446
Schedule 2	3	1,561	52	32	1,648
Crown Cases	458	1,664	33	23	2,178
GRAND TOTALS	29,559	21,501	936	276	52,272

TABLE 17

MONTH OF OCCURRENCE OF ACCIDENTS, 1938

Month of Occurrence	Medical Aid Only	Temporary Disability	Permanent Disability	Death	TOTALS
January	2,269	2,200	83	22	4,574
February	2,104	2,000	80	24	4,208
March	2,230	1,811	51	21	4,113
April	2,190	1,330	63	25	3,608
May	2,441	1,537	82	16	4,076
June	2,727	1,722	84	28	4,561
July	2,606	1,829	73	22	4,530
August	2,955	1,863	85	32	4,935
September	2,577	1,770	71	26	4,444
October	2,662	1,749	87	21	4,519
November	2,649	1,929	81	22	4,681
December	2,149	1,761	96	17	4,023
TOTALS	29,559	21,501	936	276	52,272

TABLE 18

LOCALITY OF ACCIDENTS, 1938

County or District	Medical Aid Only	Temporary Disability	Permanent Disability	Death	TOTALS
Algoma	426	553	19	8	1,006
Brant	566	239	18	7	830
Bruce	77	120	7	1	205
Carleton	777	741	25	6	1,549
Dufferin	10	16	1	..	27
Dundas	15	22	2	..	39
Durham	119	62	3	1	185
Elgin	264	227	8	2	501
Essex	1,989	506	40	8	2,543
Frontenac	419	269	11	2	701
Glengarry	14	19	1	..	34
Grenville	48	46	2	..	96
Grey	236	159	15	..	410
Haldimand	70	49	3	1	123
Haliburton	29	75	6	1	111
Halton	140	135	6	..	281
Hastings	285	386	21	2	694
Huron	99	122	5	2	228
Kenora	494	495	28	5	1,022
Kent	390	216	9	8	623
Lambton	406	182	7	6	601
Lanark	125	146	9	1	281
Leeds	383	291	7	9	690
Lennox-Addington	41	45	...	..	86
Lincoln	676	297	15	5	993
Manitoulin	5	36	...	2	43
Middlesex	681	477	17	2	1,177
Muskoka	145	214	8	1	368
Nipissing	339	715	24	6	1,084
Norfolk	179	87	3	2	271
Northumberland	50	42	6	1	99
Ontario	969	156	9	1	1,135
Oxford	474	255	10	2	741
Parry Sound	110	331	14	4	459
Patricia	91	139	8	1	239
Peel	85	102	6	3	196
Perth	218	195	11	1	425
Peterborough	407	202	8	2	619
Prescott	37	46	1	2	86
Prince Edward	64	45	4	3	116
Rainy River	141	251	5	2	399
Renfrew	203	341	21	3	568
Russell	4	18	...	..	22
Simcoe	443	349	15	3	810
Stormont	225	148	8	2	383
Sudbury	473	845	52	29	1,399
Temiskaming-Cochrane	2,692	2,665	110	41	5,508
Thunder Bay	966	1,751	46	24	2,787
Victoria	71	145	10	1	227
Waterloo	1,084	491	24	5	1,604
Welland	1,017	483	19	6	1,525
Wellington	414	223	10	4	651
Wentworth	1,975	913	59	11	2,958
York	7,888	4,343	159	32	12,422
Not in Ontario	11	75	1	5	92
TOTALS	29,559	21,501	936	276	52,272

TABLE 19

TIME LOSS, AVERAGE AGE, AND AVERAGE WAGE, 1938

Class	TIME LOSS*						AGE	WAGE
	Temporary Disability		Permanent Disability		Death Cases		All Cases	All Cases
	Total Days	Average Days	Total Days	Average Days	Total Days	Average Days	Average Age (Years)	Average Weekly Wage
1	79,771	28.49	23,330	197.71	177	7.08	34.59	$14.66
2	33,148	26.14	4,378	125.09	249	24.90	35.57	19.64
3	4,669	18.03	1,602	69.65	0	0	35.88	16.57
4	13,411	27.48	2,402	63.21	39	9.75	36.86	15.95
5	58,128	28.71	20,726	174.17	655	10.40	33.04	31.29
6	9,599	28.07	8,107	450.39	2	.50	35.90	18.19
7	3,808	28.63	2,099	149.93	0	0	37.60	24.15
8	8,066	23.72	1,185	148.13	1,245	311.25	38.10	19.65
9	11,387	25.03	4,424	163.85	68	11.33	38.30	20.17
10	21,755	22.15	6,766	92.68	70	11.67	34.46	19.44
11	19,891	24.59	6,002	122.49	570	95.00	35.98	20.08
12	11,514	27.09	3,144	184.94	37	7.40	38.51	21.26
13	7,318	31.01	1,806	150.50	....	....	41.79	19.53
14	3,658	22.04	488	61.00	60	15.00	34.45	19.63
15	28,116	22.73	6,781	178.45	15	1.88	33.61	19.42
16	5,684	27.33	2,199	129.35	0	0	34.32	17.21
17	7,988	22.13	2,783	121.00	0	0	32.93	16.08
18	7,193	20.04	3,795	379.50	4	2.00	33.05	16.67
19	7,791	22.98	2,975	156.58	....	....	35.52	18.74
20	27,849	26.25	7,167	210.79	5	.42	35.24	17.42
21	40,183	27.50	11,165	253.75	13	.08	35.04	20.44
22	21,412	27.74	3,893	194.65	63	5.73	35.41	16.99
23	8,548	32.63	3,085	237.31	13	1.86	36.56	21.16
24	48,605	32.66	19,783	267.34	698	31.73	37.17	20.05
Schedule 2	48,572	31.12	10,734	206.42	148	4.63	42.03	22.59
Crown . . .	43,862	26.36	4,219	127.85	77	3.35	42.79	17.95
ALL.	581,926	27.07	165,038	176.32	4,208	15.25	36.32	19.84

*This does not include loss of man power by permanent impairment or death.

TABLE 20

TOTAL AND AVERAGE COMPENSATION AND MEDICAL AID COSTS, 1938, SCHEDULE 1, BY CLASSES

Compensation Costs

Class	Temporary Disability Cases		Permanent Disability Cases				Death Cases						ALL CASES	
	For Temporary Disability		For Temporary Disability		For Permanent Disability		For Temporary Disability		For Death Benefits		For Funeral Expenses			
	Total	Average	Total	Average	Total	Average	Total	Average	Total	Average	Total	Average	Total	Average
	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
1	194,642.36	69.52	42,246.14	358.02	155,354.55	1,316.56	221.77	8.87	51,996.00	2,079.84	3,057.87	122.31	447,518.69	152.06
2	108,281.84	85.40	9,876.05	282.17	54,623.75	1,560.68	648.23	64.82	32,873.00	3,287.30	1,205.20	120.52	207,508.07	158.04
3	14,290.10	55.17	3,046.63	132.46	17,375.51	755.46	0	0	3,426.00	3,426.00	125.00	125.00	38,263.24	135.21
4	37,215.12	76.26	5,014.10	131.95	29,396.00	773.58	39.23	9.81	21,608.00	5,402.00	477.50	119.38	93,749.95	176.89
5	280,798.21	138.67	61,656.89	518.13	319,497.41	2,684.85	1,865.00	29.60	218,079.00	3,461.57	7,879.80	125.08	889,776.31	403.16
6	28,586.24	83.59	23,666.91	1,314.83	43,227.75	2,401.54	0	0	10,411.00	2,602.75	500.00	125.00	106,391.90	292.29
7	15,887.40	119.45	4,763.48	340.25	33,058.75	2,361.34	0	0	16,292.00	5,430.67	375.00	125.00	70,376.63	469.18
8	63,204.12	185.89	2,313.74	289.22	11,897.75	1,487.22	2,938.89	734.72	11,760.00	2,940.00	500.00	125.00	92,614.50	263.11
9	35,336.80	77.66	10,084.22	373.49	30,559.08	1,131.82	140.92	23.49	35,217.00	5,869.50	750.00	125.00	112,088.02	229.69
10	84,943.44	86.50	11,317.97	155.04	59,104.51	809.65	136.11	22.69	31,584.00	5,264.00	750.00	125.00	187,836.03	177.04
11	58,673.78	72.53	14,780.13	301.64	47,764.75	974.79	1,297.53	216.26	25,122.00	4,187.00	765.00	127.50	148,403.19	171.76
12	23,477.91	55.24	7,264.69	427.33	13,447.25	791.01	77.19	15.44	25,026.00	5,005.20	625.00	125.00	69,918.04	156.42
13	27,315.00	115.74	3,504.90	292.08	38,354.75	3,196.23	....	....	....	....	....	....	69,174.65	278.93
14	12,145.58	73.17	1,089.82	136.23	7,904.00	988.00	131.08	32.77	16,223.00	4,055.75	500.00	125.00	37,993.48	213.45
15	83,107.92	67.19	14,658.45	385.75	57,882.70	1,523.23	36.12	4.52	45,655.00	5,706.88	1,000.00	125.00	202,340.19	157.71
16	23,862.66	114.72	5,722.86	336.64	20,609.50	1,212.32	0	0	6,077.00	6,077.00	125.00	125.00	56,397.02	249.54
17	24,521.33	67.93	5,465.32	237.62	23,469.32	1,020.41	0	0	1,000.00	1,000.00	125.00	125.00	54,580.97	141.77
18	14,124.40	39.34	10,018.61	1,001.86	28,889.25	2,888.93	8.33	4.17	0	0	250.00	125.00	53,290.59	143.64
19	28,340.35	83.60	5,097.12	268.27	33,488.66	1,762.56	....	....	....	....	....	....	66,926.13	186.94
20	131,230.91	123.69	13,280.62	390.61	36,975.53	1,087.52	12.03	1.00	69,240.00	5,770.00	1,250.00	125.00	251,989.09	227.63
21	74,882.91	51.25	26,666.75	606.06	140,255.27	3,187.62	0	0	61,114.00	3,819.63	2,120.25	132.52	305,039.18	200.55
22	57,448.09	74.41	6,963.25	348.16	21,236.35	1,061.82	132.29	12.03	32,524.00	2,956.73	1,375.00	125.00	119,678.98	149.04
23	36,031.78	137.53	8,530.05	656.16	9,982.50	767.88	27.08	3.87	52,327.00	7,475.29	625.00	89.29	107,523.41	381.29
24	138,293.77	92.94	47,876.36	646.98	135,859.75	1,835.94	1,733.56	78.80	117,322.00	5,332.82	2,740.85	124.58	443,826.29	280.19
ALL...	1,596,642.02	87.36	344,905.06	405.29	1,370,214.64	1,610.12	9,445.36	42.74	884,876.00	4,003.96	27,121.47	122.72	4,233,204.55	218.79

TABLE 20—Continued

Medical Aid Costs

Class	When Medical Aid Only		In Temporary Disability Cases		In Permanent Disability Cases		In Death Cases		FOR ALL CASES	
	Total	Average	Total	Average	Total	Average	Total	Average	Total	Average
	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
1	3,775.10	5.27	88,524.36	31.62	31,527.44	267.18	2,679.57	107.18	126,506.47	34.56
2	7,266.45	6.00	42,119.02	33.22	5,887.41	168.21	2,279.48	227.95	57,552.36	22.79
3	2,420.30	5.41	5,625.22	21.72	1,976.70	85.94	2.00	2.00	10,024.22	13.73
4	4,089.70	5.72	19,301.98	39.55	2,586.31	68.06	289.50	72.38	26,267.49	21.10
5	17,829.55	7.33	110,806.13	54.72	34,215.58	287.53	3,286.65	52.17	166,137.91	35.80
6	3,150.95	6.38	12,416.31	36.31	5,371.09	298.39	137.70	34.43	21,076.05	24.56
7	3,599.25	7.38	5,600.95	42.11	3,747.77	267.70	36.00	12.00	12,983.97	20.35
8	4,717.35	5.19	20,672.42	60.80	1,463.01	182.88	1,243.99	311.00	28,096.77	22.28
9	8,330.75	5.39	18,081.54	39.74	4,945.26	183.16	814.51	135.75	32,172.06	15.82
10	18,869.14	5.39	36,748.32	37.42	9,115.41	124.87	446.57	74.43	65,179.44	14.29
11	23,338.17	6.17	27,327.99	33.78	7,682.96	156.80	2,102.25	350.38	60,451.37	13.01
12	6,581.90	7.01	20,531.01	48.31	4,591.69	270.10	584.75	116.95	32,289.35	23.30
13	1,763.15	6.02	12,694.65	53.79	2,275.57	189.63	....	......	16,733.37	30.93
14	3,996.35	7.05	5,574.54	33.58	804.10	100.51	389.50	97.38	10,764.49	14.45
15	14,524.05	6.21	37,763.95	30.53	11,423.61	300.62	476.60	59.58	64,188.21	17.72
16	3,515.10	5.99	9,950.42	47.84	2,950.83	173.58	13.00	13.00	16,429.35	20.21
17	3,934.05	5.43	14,074.75	38.99	2,941.84	127.91	5.00	5.00	20,955.64	18.90
18	4,030.83	5.66	9,566.54	26.65	3,818.48	381.85	46.00	23.00	17,461.85	16.12
19	5,045.30	6.11	11,124.36	32.82	3,518.99	185.21	....	......	19,688.65	16.63
20	5,510.25	5.90	41,447.55	39.06	9,970.58	293.25	617.65	51.47	57,546.03	28.20
21	7,459.92	5.33	42,798.74	29.29	16,640.51	378.20	368.55	23.03	67,267.82	23.04
22	7,352.85	5.89	27,764.47	35.96	5,604.06	280.20	2,132.75	193.89	42,854.13	20.88
23	2,355.54	6.30	13,125.45	50.10	4,253.00	327.15	432.28	61.75	20,166.27	30.74
24	10,770.95	5.63	67,730.36	45.52	23,995.64	324.27	2,855.70	129.80	105,352.65	30.14
ALL....	174,226.95	5.99	701,371.03	38.38	201,307.94	236.55	21,240.00	96.11	1,098,145.92	22.67

TABLE 21

ALLEGIANCE OF INJURED WORKERS, 1938

Allegiance to	Temporary Disability	Permanent Disability	Death	TOTALS
Albania	3	...	5	8
Argentine	2	...	...	2
Austria	133	2	...	135
Belgium	6	...	...	6
Brazil	15	...	...	15
Bulgaria	...	1	...	1
China	1	...	...	1
Czecho-Slovakia	96	4	1	101
Denmark	18	2	...	20
Esthonia	3	...	...	3
Finland	410	12	10	432
France	17	...	...	17
Germany	51	5	1	57
Great Britain	19,531	853	239	20,623
Greece	6	...	...	6
Holland	4	...	...	4
Italy	165	9	2	176
Jugo-Slavia	129	16	6	151
Lithuania	3	...	...	3
Norway	35	1	...	36
Persia	4	...	...	4
Poland	382	13	5	400
Roumania	30	1	...	31
Russia	74	1	...	75
Spain	2	...	...	2
Sweden	77	2	5	84
Switzerland	2	...	...	2
Turkey	1	...	...	1
United States	45	1	2	48
Ukraine	207	10	...	217
Not Specified	49	3	...	52
TOTALS	21,501	936	276	22,713

TABLE 22

SEX AND MARITAL CONDITION OF INJURED WORKERS, 1938

Sex and Marital Condition	Temporary Disability	Permanent Disability	Death	TOTALS
Males—				
Married	12,396	573	181	13,150
Single	7,790	302	36	8,128
Widowed	392	24	7	423
Not Specified	508	21	49	578
Totals	21,086	920	273	22,279
Females—				
Married	94	6	1	101
Single	292	8	2	302
Widowed	20	1	...	21
Not Specified	9	1	...	10
Totals	415	16	3	434
GRAND TOTALS	21,501	936	276	22,713

TABLE 23

WEEK OF TERMINATION OF TEMPORARY DISABILITIES, 1938

In	8,814	cases	the	disability	terminated	in	1	to	2	weeks	after	the	accident
"	3,743	"	"	"	"	"	2	"	3	"	"	"	"
"	2,391	"	"	"	"	"	3	"	4	"	"	"	"
"	1,539	"	"	"	"	"	4	"	5	"	"	"	"
"	1,126	"	"	"	"	"	5	"	6	"	"	"	"
"	796	"	"	"	"	"	6	"	7	"	"	"	"
"	562	"	"	"	"	"	7	"	8	"	"	"	"
"	453	"	"	"	"	"	8	"	9	"	"	"	"
"	367	"	"	"	"	"	9	"	10	"	"	"	"
"	251	"	"	"	"	"	10	"	11	"	"	"	"
"	216	"	"	"	"	"	11	"	12	"	"	"	"
"	173	"	"	"	"	"	12	"	13	"	"	"	"
"	133	"	"	"	"	"	13	"	14	"	"	"	"
"	115	"	"	"	"	"	14	"	15	"	"	"	"
"	67	"	"	"	"	"	15	"	16	"	"	"	"
"	61	"	"	"	"	"	16	"	17	"	"	"	"
"	55	"	"	"	"	"	17	"	18	"	"	"	"
"	63	"	"	"	"	"	18	"	19	"	"	"	"
"	45	"	"	"	"	"	19	"	20	"	"	"	"
"	47	"	"	"	"	"	20	"	21	"	"	"	"
"	34	"	"	"	"	"	21	"	22	"	"	"	"
"	32	"	"	"	"	"	22	"	23	"	"	"	"
"	34	"	"	"	"	"	23	"	24	"	"	"	"
"	30	"	"	"	"	"	24	"	25	"	"	"	"
"	26	"	"	"	"	"	25	"	26	"	"	"	"
"	24	"	"	"	"	"	26	"	27	"	"	"	"
"	13	"	"	"	"	"	27	"	28	"	"	"	"
"	22	"	"	"	"	"	28	"	29	"	"	"	"
"	17	"	"	"	"	"	29	"	30	"	"	"	"
"	20	"	"	"	"	"	30	"	31	"	"	"	"
"	11	"	"	"	"	"	31	"	32	"	"	"	"
"	12	"	"	"	"	"	32	"	33	"	"	"	"
"	11	"	"	"	"	"	33	"	34	"	"	"	"
"	13	"	"	"	"	"	34	"	35	"	"	"	"
"	14	"	"	"	"	"	35	"	36	"	"	"	"
"	126	"	"	"	"	"	36	"	52	"	"	"	"
"	45	"	"	"	did not terminate in				52	"	"	"	"
	21,501	TOTAL CASES											

TABLE 24

NATURE OF INJURIES, 1938

Temporary Disability Cases

Class	Bruises, Contusions, and Abrasions	Cuts, Lacerations, and Punctures	Fractures	Crushes	Sprains, Strains, Twistings, and Wrenchings	Scalds and Burns	Eye Injuries	Herniæ	Internal Injuries	Concussions (brain, spine, etc.)	Dislocations	All Other Injuries	Industrial Diseases (Schedule 3)	TOTALS
1	627	932	412	184	418	25	58	42	8	7	25	62	. .	2,800
2	250	383	163	71	259	33	23	35	2	5	2	42	. .	1,268
3	28	141	26	11	33	6	6	3	1	1	. .	3	. .	259
4	61	219	73	25	62	14	15	6	. .	4	3	6	. .	488
5	434	575	389	130	258	54	109	27	1	6	15	25	2	2,025
6	63	98	60	30	50	14	10	7	. .	2	3	5	. .	342
7	27	24	27	7	19	12	5	6	. .	2	1	3	. .	133
8	51	79	51	36	41	53	15	6	. .	. .	. .	2	6	340
9	87	134	72	51	48	21	23	10	. .	3	5	. .	1	455
10	105	391	136	85	98	79	36	23	2	2	8	17	. .	982
11	125	241	120	53	121	59	38	21	2	4	8	15	2	809
12	72	106	80	26	66	35	10	16	. .	3	6	5	. .	425
13	31	59	36	14	64	6	12	7	1	1	2	3	. .	236
14	12	88	24	3	22	3	4	5	. .	2	. .	3	. .	166
15	168	453	152	66	237	89	11	14	2	8	14	25	. .	1,237
16	23	74	28	14	31	19	4	4	1	1	2	6	1	208
17	54	143	40	38	40	15	6	11	2	. .	1	11	. .	361
18	31	182	31	16	49	27	1	2	4	3	7	6	. .	359
19	52	113	41	42	58	11	6	5	1	. .	2	7	1	339
20	195	262	200	85	252	17	14	17	2	2	5	10	. .	1,061
21	348	358	196	109	290	57	56	12	2	3	5	25	. .	1,461
22	141	251	129	39	123	26	22	13	1	1	7	17	2	772
23	46	84	39	23	40	8	5	3	. .	3	5	6	. .	262
24	248	406	301	64	276	67	47	14	3	10	27	23	2	1,488
Schedule 2	338	304	322	88	304	55	49	32	2	3	15	49	. .	1,561
Crown	366	380	274	110	334	48	41	43	3	7	22	35	1	1,664
ALL	3,983	6,480	3,422	1,420	3,593	853	626	384	40	83	190	409	18	21,501

TABLE 24—Continued

Permanent Disability Cases

Part of Body Affected	Per Cent. Impairment of Total Earning Capacity											
	0.0–9.9	10.0–19.9	20.0–29.9	30.0–39.9	40.0–49.9	50.0–59.9	60.0–69.9	70.0–79.9	80.0–89.9	90.0–99.9	100	TOTALS
Foot	40	17	6	7	..	2	..	..	..	..	1	73
Leg	26	12	14	3	8	2	2	1	..	..	2	70
Head	2	2	3	1	1	2	1	..	..	..	3	15
Eye	37	56	3	..	..	..	..	..	..	..	6	102
Ear	...	...	1	..	..	..	..	..	..	..	..	1
Arm	19	16	11	7	3	5	2	2	..	..	..	65
Hand	18	23	12	7	8	..	..	..	..	..	..	68
Thumb and two fingers	...	4	1	2	..	..	..	..	..	..	..	7
Thumb and one finger	8	3	..	2	..	..	..	..	..	..	..	13
Thumb	91	2	..	..	..	..	..	..	..	..	..	93
One finger	229	1	1	..	..	..	..	..	..	..	..	231
Two fingers	82	6	1	..	..	..	..	..	..	..	..	89
Three fingers	24	18	4	1	..	..	..	..	..	..	..	47
Four fingers	6	6	5	2	..	..	..	..	..	..	..	19
Internal organs	...	...	..	1	..	..	..	..	..	..	..	1
Industrial diseases	...	...	..	..	..	..	..	1	..	..	1	2
All other	6	1	10	3	1	9	2	2	..	..	6	40
TOTALS	588	167	72	36	21	20	7	6	..	..	19	936

Industrial Diseases

Description of Disease	Medical Aid Only	Temporary Disability	Permanent Disability	Death	TOTALS
Lead poisoning or its sequelae	2	15	..	..	17
Silicosis, pneumoconiosis, phthisis	12	1	2	7	22
Chrome poisoning or its sequelae	..	2	..	..	2
TOTALS	14	18	2	7	41

TABLE 25

CAUSES OF ACCIDENTS, 1938

Cause	Medical Aid Only	Temp. Dis.	Perm. Dis.	Death	TOTALS
A. Prime Movers:					
1. Motors, engines, fans, pumps, and automatic stokers	271	110	8	..	389
2. Shafting, couplings, collars, set-screws, and keys	...	3	..	..	3
3. Belts, lines, pulleys, chains, and sprockets	287	210	20	..	517
4. Gears, cogs, cams, and friction wheels	43	28	10	..	81
Totals	601	351	38	..	990
B. Working Machines:					
1. Brick-making machines	3	5	1	..	9
2. Glass-making machines	18	7	..	..	25
3. Pottery-making machines	...	1	..	..	1
4. Stone-working machines	1	1	..	..	2
5. Mine-drills, etc.	366	357	16	1	740
6. Contracting machines	194	180	8	3	385
7. Metal-working machines, n.e.s.	324	124	22	..	470
8. Abrasive wheels	1,584	108	4	..	1,696
9. Drilling and reaming machines	300	38	8	..	346
10. Lathes	572	46	4	2	624
11. Milling Machines	153	26	4	..	183
12. Pneumatic tools	562	70	4	..	636
13. Presses—cutting, shaping, forming	313	130	41	..	484
14. Shearing and punching machines	255	71	11	1	338
15. Wire-working machines	41	18	4	..	63
16. Welding and heat-cutting machines	376	38	2	2	418
17. Wood-working machines, n.e.s.	163	117	19	..	299
18. Planers, jointers, and edgers	79	73	27	1	180
19. Saws	324	310	85	2	721
20. Shapers, moulders, and headers	25	21	6	..	52
21. Pulp and paper-making machines, n.e.s.	19	9	3	..	31
22. Barkers	5	5	..	..	10
23. In-running rolls	33	25	6	..	64
24. Paper-products and printing machines, n.e.s.	65	28	7	..	100
25. Cutting machines	44	11	2	..	57
26. Presses—printing and embossing	89	45	5	..	139
27. Stayers	55	29	3	..	87
28. Tanning machines	3	6	1	..	10
29. Leather-working machines	41	19	2	..	62
30. Rubber-working machines	28	7	4	..	39
31. Textile machines, n.e.s.	79	77	7		163
32. Carders	3	4	..	..	7
33. Pickers	1	4	..	..	5
34. Sewers	235	79	2	..	316
35. Finishers and launderers	39	38	5	..	82
36. Knitters	42	17	1	..	60
37. Cutters	49	20	..		69
38. Weavers	54	21	1		76
39. Spinners	13	12	2		27
40. Food-products, laboratory, and tobacco machines, n.e.s.	143	94	9	..	246
41. Baking machines	18	18	5	..	41
42. Bottling machines	68	36	1	..	105
43. Office machines	17	4	..	..	21
Totals	6,796	2,349	332	12	9,489

TABLE 25—Continued

Cause	Medical Aid Only	Temp. Dis.	Perm. Dis.	Death	TOTALS
C. Hoisting Apparatus:					
1. Elevators	57	66	2	2	127
2. Cranes	98	79	8	2	187
3. Conveyors	108	76	6	2	192
4. Mine cages	50	71	8	11	140
5. Other hoisting apparatus	168	216	12	9	405
Totals	481	508	36	26	1,051
D. Dangerous Substances:					
1. Steam escapes	93	71	2	..	166
2. Explosives	95	140	24	18	277
3. Electric currents	50	55	1	9	115
4. Conflagrations	2	3	..	1	6
5. Hot and inflammable substances and flames	564	470	4	8	1,046
6. Corrosive substances	298	101	4	..	403
7. Poisonous and deleterious substances	92	131	2	7	232
Totals	1,194	971	37	43	2,245
E. Stepping On or Striking Against Objects:					
1. Stepping on objects	533	276	..	..	809
2. Striking against objects	1,433	512	14	3	1,962
Totals	1,966	788	14	3	2,771
F. Falling Objects:					
1. From collapse of structure	1	...	..	..	1
2. From elevations	484	371	8	3	866
3. In mines and quarries	283	349	23	9	664
4. Other	434	850	17	24	1,325
Totals	1,202	1,570	48	36	2,856
G. Handling Objects:					
1. Heavy objects—loading, carrying, rolling, or piling	4,776	4,760	82	3	9,621
2. Sharp objects	1,021	276	10	..	1,307
3. Hand trucks, carts, and wheel-barrows	460	365	5	1	831
Totals	6,257	5,401	97	4	11,759
H. Tools:	2,840	2,078	74	4	4,996
I. Runaways and Animals:					
1. Runaways	14	27	2	..	43
2. Animals	136	190	1	..	327
Totals	150	217	3	..	370

TABLE 25—Continued

Cause	Medical Aid Only	Temp. Dis.	Perm. Dis.	Death	TOTALS
J. Moving Trains, Vehicles, Etc.:					
1. Train wrecks	2	13	1	4	20
2. Caught in switch or hit fixed objects	2	19	1	..	22
3. Stuck by or caught between cars and engines	3	27	5	20	55
4. Other causes, cars and engines	42	380	12	5	439
5. Mine and quarry cars	200	270	7	1	478
6. Automobiles and other power vehicles	1,181	881	37	30	2,129
7. Animal-drawn vehicles	161	357	5	1	524
8. All other vehicles, including boats	56	159	8	9	232
Totals	1,647	2,106	76	70	3,899
K. Falls of Persons:					
1. From elevations	366	726	27	17	1,136
2. From ladders	207	288	23	5	523
3. Into excavations, pits, and shafts	152	240	6	4	402
4. On level	1,596	2,084	37	3	3,720
5. Into elevator shafts	2	8	1	2	13
6. From vehicles	133	237	10	3	383
7. From collapse of support	92	209	14	5	320
8. On steps	272	286	3	1	562
9. From tool slipping	116	185	2	..	303
Totals	2,936	4,263	123	40	7,362
L. Flying Fragments	2,947	487	49	2	3,485
M. All Other Causes:					
1. Doors, gates, windows, and covers	370	169	3	1	543
2. Inhalation of gases, fumes, etc.	34	19	..	3	56
3. Immersion in water and drenchings	1	...	..	17	18
4. Exposure to elements	25	111	2	..	138
5. Violence	66	56	1		123
6. Cave-ins	13	53	3	15	84
7. Not elsewhere specified	33	4	..		37
Totals	542	412	9	36	999
GRAND TOTALS	29,559	21,501	936	276	52,272

TABLE 26

DEATH CASES, 1938

Number of Cases

Pension Awards	171
Lump Sums	37
Burial Expenses and Medical Aid only	53
Burial Expenses only	15
TOTAL	276

Number, Relationship, and Residence of Dependants

Relationship of Dependants	Resident in Ontario	Not Resident in Ontario	TOTALS
Widow	154	14	168
Child	225	6	231
Mother	27	6	33
Father	13	4	17
Other	2	. .	2
TOTALS	421	30	451

APPENDIX

SUMMARY OF COMPENSATION AND MEDICAL AID AWARDED

From Commencement of Act to End of 1939

Compensation Awarded

Schedule 1 Industries	$87,972,061.45
Schedule 2 (including Crown Cases)	26,658,807.10
Total Compensation	$114,630,868.55

Medical Aid Paid

Schedule 1 Industries	$20,322,686.97
Schedule 2 (including Crown Cases)—Furnished by Employer	
Total Benefits Awarded by Board	$134,953,555.52

SUMMARY OF ACCIDENTS REPORTED

From Commencement of Act to End of 1939

Total Number of Accidents Reported	1,373,677

FINANCIAL STATEMENT FOR SCHEDULE 1 INDUSTRIES

From Commencement of Act to End of 1939

Income and Credits	
Net Assessments received	$116,065,120.17
Received under Section 8	172,218.46
Received under Section 84 (4)	53,159.45
Received under Section 107	161,653.12
Received under Section 114	6,660.27
Received from D.P. & N.H.	281,101.42
Received for Accidents to Blind Workmen	907.19
Received from A.C.R.	56,683.94
Interest received	3,105,894.79
Credited from Disaster Reserve	376,266.07
Credited from Pension Fund	1,027,214.62
	$121,306,879.50

Expenditure and Charges	
Compensation paid other than pensions, compensation deferred, and under Sections 22 and 36	$46,053,297.56
Pensions awarded	39,175,094.73
Deferred Compensation awarded	913,611.24
Paid under Section 22	996.40
Paid under former Section 36	41.75
Paid under Section 8	13,625.39
Medical Aid paid	20,155,255.34
Administration Expenses paid	5,188,286.17
Paid to Safety Associations	2,686,611.96
Rehabilitation paid	74,534.95
Paid for Mine Rescue Work	178,161.82
Paid for Occupational Therapy	12,771.63
Paid for Pneumoconiosis Examinations	66.14
Pneumoconiosis estimated outstanding	1,189,133.67
Compensation and Medical Aid estimated outstanding	2,541,949.94
Transferred to Disaster Reserve	353,259.80
Assessments estimated to be refunded on adjustment of 1939 pay rolls (see Table 1)	121,470.00
Balance at Credit of Classes (see Table 1)	2,648,711.01
	$121,306,879.50

SUMMARY OF PENSION FUND, SCHEDULE 1

From Commencement of Act to End of 1939

Pension awards	$39,040,470.47
Amount transferred from Disaster Reserve	134,624.26
Amount transferred from Silicosis Account	980,290.24
Interest added	16,628,175.49
	$56,783,560.46
Pension payments	30,917,471.35
	$25,866,089.11
Amount transferred to Current Fund	1,027,214.62
Balance December 31, 1939	$24,838,874.49

SUMMARY OF COMPENSATION DEFERRED, SCHEDULE 1

From Commencement of Act to End of 1939

Compensation Deferred	$915,372.71
Interest added	104,084.13
	$1,019,456.84
Paid on Compensation Deferred, Principal and Interest	958,506.82
Balance December 31, 1939	$60,950.02

SUMMARY OF DISASTER RESERVE, SCHEDULE 1

From Commencement of Act to End of 1939

Amount set aside	$353,259.80
Interest added	251,788.38
	$605,048.18
Transferred to classes	376,266.07
Balance December 31, 1939	$228,782.11

SUMMARY OF RESERVE FOR DEPRECIATION OF SECURITIES, SCHEDULE 1

From Commencement of Act to End of 1939

Profit on sale of investments	$702,115.14
Interest	617,402.14
	$1,319,517.28
Transferred to Investment Account	356,048.72
Balance December 31, 1939	$963,468.56

SUMMARY OF SILICOSIS ACCOUNT, SCHEDULE 1

From Commencement of Act to End of 1939

Assessments collected		$4,885,149.34
Interest added		100,911.88
		$4,986,061.22
Payments made:		
Compensation	$1,754,167.77	
Medical Aid	167,431.63	
Salaries and Expenses	566,388.59	
Handling Claims and Supervision	129,193.65	
Salaries and Expenses of Referee Board	40,563.26	
		2,657,744.90
Balance December 31, 1939		$2,328,316.32

SUMMARY OF INVESTMENTS, SCHEDULE 1

From Commencement of Act to End of 1939

Invested		$62,926,309.67
Less principal returned	$28,194,056.68	
Less amount written off for Depreciation	356,048.72	
		28,550,105.40
Book Value of Investments, December 31, 1939		$34,376,204.27

SUMMARY OF SCHEDULE 2 FUNDS

From Commencement of Act to End of 1939

Received from employers		$21,559,969.91
Interest received		3,703,801.23
Profit on sale of investments		199,336.41
		$25,463,107.55
Payments made	$20,806,480.41	
Deposits returned to employers	1,106,164.21	
		21,912,644.62
Cash in Bank and Invested, December 31, 1939		$3,550,462.93

SUMMARY OF INVESTMENTS, SCHEDULE 2

From Commencement of Act to End of 1939

Invested	$5,480,065.39
Less principal returned	2,005,869.19
Book Value of Investments, December 31, 1939	$3,474,196.20

SUMMARY OF RESERVE FOR DEPRECIATION OF SECURITIES, SCHEDULE 2

From Commencement of Act to End of 1939

Profit on sale of investments	$199,336.41
Interest added	7,540.99
Balance December 31, 1939	$206,877.40

SUMMARY OF RECEIPTS AND PAYMENTS

From Commencement of Act to End of 1939

Schedule 1

Receipts		
Assessments, Including additional assessments, added percentage, and interest for under or over estimate,	$117,056,178.22	
Less Merit Rating: (Charges..$1,067,195.43 Refunds... 2,058,253.48)	−991,058.05	
		$116,065,120.17
Section 8		172,218.46
Section 84 (4)		53,159.45
Section 107		161,653.12
Section 114		6,660.27
D.P. & N.H.		281,101.42
From Province of Ontario for Blind Workmen		907.19
Accident Cost Refunds		56,683.94
Silicosis Assessments		4,885,149.34
From Province of Ontario under Section 78, grants for administration expenses		655,500.00
Interest from investments and bank deposits		20,808,256.81
From Schedule 2 and Crown Employers for share of administrative expense		1,010,979.79
Principal returned from investments		28,194,056.68
Profit on sales of investments		702,115.14
For special statistical and other services		105,931.89
Rehabilitation Clinic		76,353.33
Refund of administration expenses, result of special investigation		782.35
		$173,236,629.35

Payments	
Compensation payments, other than pensions or deferred payments or under Sections 22 or 36	$46,053,297.56
Pensions	30,917,471.35
Deferred Payments, principal and interest	958,506.82
Under Section 22	996.40
Under former Section 36	41.75
Under Section 8	13,625.39
Medical Aid	20,155,255.34
Rehabilitation	74,534.95
Administration Expenses	7,138,512.39
Safety Associations	2,686,611.96
Investments	62,926,309.67
Silicosis	1,546,499.54
Mine Rescue Work	169,925.90
Rehabilitation Clinic	68,310.03
Occupational Therapy	14,131.37
Pneumoconiosis Examinations	66.14
Overpayment of Administration Expenses from Schedule 2 Employers (refunded in 1926)	.12
Cash in Banks, December 31, 1939	512,532.67
	$173,236,629.35

Schedule 2

Receipts	
From Employers for Deposits under Section 28 and for Claimants' Moneys	$7,113,151.80
From Employers for Deposits under Section 32	14,446,818.11
Interest from Investments and Bank Deposits	3,703,801.23
Principal returned from Investments	2,005,869.19
Profit on Sale of Investments	199,336.41
	$27,468,976.74

Payments	
To Claimants out of Deposits under Section 28 and Claimants' Moneys	$6,560,794.34
Returned to Employers out of Deposits under Section 28	951,989.28
Paid out of Deposits under Section 32:	
Compensation and Medical Aid	14,242,187.15
Rehabilitation	3,498.92
Returned to Employers	148,405.43
To Schedule 1 for Administration Expenses	5,769.50
Investments	5,480,065.39
Cash in Bank, December 31, 1939	76,266.73
	$27,468,976.74

AUDITOR'S CERTIFICATE

28th February, 1940.

THE WORKMEN'S COMPENSATION BOARD OF ONTARIO,
Toronto, Ont.

Dear Sirs:

I have completed a continuous audit of the books of the Board for the year ended 31st December, 1939, and have obtained all the information and explanations I have required.

In my opinion the attached statements of Receipts and Payments, Table 6, Schedules No. 1 and No. 2, do truly and fairly set forth the cash transactions of the Board for the year ended 31st December, 1939.

Bank balances at the close of the period have been verified by direct communication with the Board's bankers.

Securities representing the Board's investments as at 31st December, 1939, have been confirmed by physical examination and were found to agree with the records maintained by the Board, as at that date. The amortized book value of these investments is $37,850,400.47. Debenture principal and coupons, due and unpaid, amount to $365,084.21 at 31st December, 1939.

Respectfully submitted,

ALEXANDER G. CALDER,
Chartered Accountant.

TABLE 6

STATEMENT OF RECEIPTS AND PAYMENTS DURING 1939

Schedule 1

Receipts

Cash in Banks, 1st Jan., 1939:		
Canadian Bank of Commerce	$1,626.83	
Dominion Bank	376,819.49	
Royal Bank of Canada	20,291.50	
		$398,737.82
Net Assessments, Penalties, etc.:		
Gross Assessments	$6,216,945.82	
Under Section 8	7,647.85	
Under Section 84 (4)	1,150.00	
Under Section 107	3,247.64	
Under Section 114	404.35	
From D.P. & N.H.	43,003.00	
From Accident Cost Refunds	4,841.05	
	$6,277,239.71	
Less:		
Assessments and Penalties Refunded	92,176.09	
		6,185,063.62
Silicosis Assessments		497,597.58
Interest:		
Investments	$1,431,008.38	
Exchange Premiums	13,214.82	
Bank and Short Date Deposits	3,406.06	
		1,447,629.26
Investments:		
Principal Returned	$529,959.07	
Short Date Deposits Returned	500,000.00	
Profit on Sale of Investment Securities	23,194.48	
		1,053,153.55
From Schedule 2 and Crown employers for Administration Expenses, account of prior years, paid out of Schedule 1 in 1938		63,833.15
Special Statistical and other services		10,905.00
Rehabilitation Clinic:		
Refunds from Medical Aid	$14,278.92	
Refunds from Schedule 2 Employers	235.75	
		14,514.67
		$9,671,434.65

Payments

Compensation other than Pensions and Deferred Compensation		$1,742,526.59
Pensions		2,286,696.13
Deferred Compensation		39,590.94
Rehabilitation		11,444.62
Medical Aid		1,073,508.45
Silicosis		193,376.24
Under Section 8		1,087.40
Mine Rescue Work		18,027.11
Administration Expenses		481,930.63
Safety Associations		218,511.25
Rehabilitation Clinic Expenses		11,768.68
Occupational Therapy		11,705.60
		$6,090,173.64
Investments:		
Securities for permanent investment	$2,718,728.34	
Short Date Deposits	350,000.00	
		3,068,728.34
Cash in Banks, 31st December, 1939:		
Canadian Bank of Commerce	$ 747.80	
Dominion Bank	488,189.50	
Royal Bank of Canada	23,595.37	
		512,532.67
		$9,671,434.65

Schedule 2

Receipts

Cash in Bank, 1st January, 1938:		
Imperial Bank		$ 76,154.48
Employers' Deposits under Section 28		177,013.25
Employers' Deposits under Section 32		748,226.13
Employers' Deposits of Claimants' Moneys		4,075.85
Interest:		
Investments	$166,466.33	
Exchange Premiums	910.34	
Bank Deposits	397.82	
		167,774.49
Investments:		
Principal Returned	$428,110.81	
Profit on sale of Investment Securities	22,694.11	
		450,804.92
		$1,624,049.12

Payments

Claimants out of Deposits under Section 28		$ 353,685.45
Deposits Returned to Employers under Section 28		202,075.63
Claimants out of Claimants' Moneys		5,361.54
Paid out of Deposits under Section 32:		
Compensation	$686,098.16	
Medical Aid	44,722.10	
Rehabilitation	415.75	
		731,236.01
Deposits Returned to Employers under Section 32		20,976.23
Investments		234,447.53
Cash in Bank, 31st December, 1939:		
Imperial Bank		76,266.73
		$1,624,049 12

Ontario Department of Agriculture

REPORT

OF THE

Ontario Veterinary College

1938

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1939

REPORT OF THE

Ontario Veterinary College

TO THE HONOURABLE P. M. DEWAN,
Minister of Agriculture.

Sir:—

I have the honour to present herewith the following report of the Ontario Veterinary College for the year extending from April 1st, 1938, to March 31st, 1939.

Convocation

At the Convocation of the University of Toronto held on May 13th, 1938, the Chancellor, The Rt. Hon. Sir William Mulock, P.C., K.C.M.G., M.A., LL.D., conferred the degree of Bachelor of Veterinary Science (B.V.Sc.) on fifty-six graduates. W. R. Reek, B.S.A., Deputy Minister of Agriculture, delivered the customary address to the graduating class.

Commencement

The Annual Commencement and Presentation of Prizes took place on November 9th, 1938, in the Assembly Hall of the College. The Hon. P. M. Dewan, Minister of Agriculture, in his address to the students stressed the importance of scientific training and diligent application as the basis for a successful start in life. A. E. Cameron, V.S., M.C., Acting Veterinary Director General, also spoke briefly and in his remarks emphasized the increasing value of veterinary science in national development. The prizes won by students were presented by R. W. Gladstone, M.P. for South Wellington. He congratulated the prize winners and urged them to prove worthy of their awards.

Student Enrolment

The number of students in attendance has again shown a noticeable increase. A total of 261 students were enrolled this session being an increase of 18 over the previous year. The attendance has now reached the highest level since the year 1915 and greatly exceeds the normal capacity of the building. An effort has been made to reduce the attendance by excluding students from outside of Canada. If the attendance is to be maintained at the present level additional accommodation will be necessary.

The Teaching and Executive Staff

The members of the staff of the different departments are as follows:

C. D. McGilvray, M.D.V., D.V.Sc., *Principal: Contagious Diseases, Sanitary Science.*

W. J. R. Fowler, B.V.Sc., D.V.M.: *Anatomy and Surgery.*

H. E. Batt, V.S., B.V.Sc.: *Zoology, Histology, Meat Inspection.*

R. A. McIntosh, M.D.V., B.V.Sc.: *Diseases of Cattle, Obstetrics, Therapeutics.*
F. W. Schofield, B.V.Sc., D.V.Sc.: *Pathology, Bacteriology.*
L. Stevenson, B.V.Sc., M.S.: *Physiology.*
A. A. Kingscote, B.V.Sc., D.V.Sc.: *Parasitology, Pathology.*
J. S. Glover, B.V.Sc.: *Poultry Diseases, Milk Hygiene.*
V. R. Brown, B.V.Sc.: *Anatomy, Hygiene.*
G. Cairns, B.V.Sc., M.R.C.V.S.: *Sporadic Diseases, Hygiene.*
T. L. Jones, B.V.Sc., M.Sc.: *Bacteriology.*
A. F. Bain, B.V.Sc.: *Bacteriology.*
F. J. Cote, B.V.Sc.: *Canine and Feline Diseases.*
J. K. Blair: *Jurisprudence.*
A. L. Shepherd: *Executive Clerk.*
Miss E. Sleeman: *Secretary.*
Miss L. Nott: *Librarian.*
Miss M. Urquhart: *Stenographer.*

Courses of Study and Instruction

As a result of the increased attendance a further readjustment of the laboratory classes was necessary. The normal capacity of each laboratory section provides accommodation for approximately 35 students in each class, making a total of 140 students. This number has now been increased to approximately 65 students in each class, making a total of 260 students to be accommodated, or a surplus of 120 students over the normal number. To meet this exigency all of the laboratory classes had to be divided into two sections. This necessarily doubled the class periods and duplicated the teaching time of the instructors. Each member of the staff has assumed this extra burden and the general course of instruction has been successfully maintained. A detailed outline of the regular course of study and instruction is contained in the college calendar which is distributed to those interested. In addition to the regular undergraduate course which is outlined in the college calendar, special short courses were provided as follows:

Special Courses

During the month of June a special course was provided in the interests of fur farmers. This was arranged in cooperation with the Ontario Fur Farmers' Association. The course comprised special lectures and demonstrations on the following subjects:

Essential Minerals for Fur Bearers.
Mink from the Viewpoint of the Fur Trade.
Mink from the Furriers' Viewpoint.
Mink Raising Problems.
Fundamentals of Successful Fox Farming.
Cooperation Between Rancher and Laboratory.
Discussion on Breeding.
Mink Farming in General.
A Summary of Observations of Infections on Fur Farms.
Fur Pelts:—Types and Markets.
Practices and Malpractices Observed During Routine.
Ranch Inspection.
Fox Raising Problems.

During the month of July a special course for practicing veterinarians was held in cooperation with the Ontario Veterinary Association. The course comprised the following topics:

Gross Anatomy of the Udder.
Physiology of Milk Secretion.
Pathology of Mastitis.
Plan for the Testing of Herds for Mastitis.
The Various Laboratory Tests for Mastitis.
Demonstration of Tests for Mastitis.
Sweet Clover Poisoning.
Diseases of Young Pigs.
Gastritis in Cats.
Calf Diphtheria.
Preventable Diseases of Swine.
Diagnosis and Treatment of Common Parasitic Diseases.
Mineral Deficiency Diseases.
Plans for the Control of Bang's Disease.
Researches on Joint-Ill of Foals.
Artificial Insemination.

During the months of December and January a series of lectures and demonstrations were given to students attending the Farmers' Short Course and Dairy Course at the Ontario Agricultural College. The course embraced the following topics:

Prevention and Control of Animal Insect Pests.
Mineral Deficiencies Affecting Farm Animals.
Preventable Diseases of Horses and Cattle.
Preventable Diseases of Sheep and Swine.
Care and Management of Breeding Animals.
Care and Management of the Young at Birth.
Cleaning and Disinfection of Stables.
Examination of Horses for Soundness.

Research and Investigation

While the College is essentially an educational institution, nevertheless a great deal of research and investigational work of much value has been done in the diagnosis, prevention and control of infectious diseases of animals. Some of the diseases receiving attention are briefly summarized herewith, and detailed reports of some are submitted as appendices.

Tuberculosis in the Horse: While common in cattle, Tuberculosis on the other hand is rather unusual in horses. The horse referred to showed clinical symptoms manifested by discharge from the nostrils, cough and distressed breathing, emaciation and enlargement of the cervical lymph glands. It reacted to the tuberculin test. It was negative to the mallein test. Post mortem and laboratory examination confirmed the diagnosis.

Joint-Ill of Foals: An extensive investigation was made into this disease of foals. Valuable knowledge with regard to the etiology of the disease as it occurs in this province was obtained. As a result of this a suitable biological treatment has been prepared and widely distributed for use in the prevention of this serious infection.

Encephalomyelitis of Horses: This disease which is commonly known as "Sleeping Sickness" was reported affecting horses in the Counties of Lincoln, Welland, Brant and Waterloo. The occurrence of these cases was thoroughly investigated and researches undertaken to determine the type of virus present. Every effort is being made to cope with any further outbreaks. Directions were issued as to the desirability of preseasonal vaccination of horses in the affected districts. A detailed report of the investigation undertaken is submitted separately.

Blackleg of Cattle: Cases of Blackleg among stabled cattle during the winter months seem to be increasing in frequency. Their occurrence during the winter is apt to be misleading from the standpoint of diagnosis. Verification of the true nature of the disease is essentially a laboratory procedure. Several outbreaks were investigated during the past winter.

Hemoglobinuria of Cattle: Further research was carried on into this disease commonly known as Red Water of Cattle. The disease was unusually prevalent during the late fall months. An interesting observation was made that in many cases there is a definite reduction in the blood phosphorus. The relationship of this condition to the disease has not yet been ascertained.

Scrapie of Sheep: A case of suspected Scrapie in an imported sheep was kept under observation at the college until the diagnosis was confirmed and a post mortem examination made. This is the first case of this disease to be reported in Canada.

Pulpy Kidney Disease of Sheep: Several cases of this disease of sheep were investigated and preventive measures instituted. This disease has only recently been recognized, but in all probability has existed among sheep in this country for some years.

Stiff Lamb Disease: The exact nature and cause of this disease of young lambs is not definitely known as yet and is deserving of further study as to its probable cause and prevention.

Avian Plague: A serious outbreak of this disease involving several hundred birds in a large aviary was investigated. The cause of the disease which proved to be a virus was isolated. Typical cases of the disease were produced by inoculating healthy birds with the virus.

Extension Service

This service has been promoted to furnish specialized assistance in the diagnosis, prevention and operative treatment of diseases in all classes of animals. It has been developed along such lines of usefulness as seemed to be most effective and desirable and to furnish clinical and laboratory material for teaching and demonstration purposes in class work. It thus serves a twofold purpose and has also been made more or less self-sustaining by making a nominal charge to cover any expense incurred where the service rendered is of an individual commercial nature. The nature and extent of the services rendered are briefly summarized as follows:

Animal Clinics: These clinics are held regularly each week throughout the College session. All animals admitted are carefully examined and medical treatment is prescribed and surgical operations performed as may appear desirable. The value and importance of the service rendered is manifested by the large number of animals receiving attention. The cases selected were quite varied in character and included all species of animals, comprising upwards of 225 horses, 150 cattle, 100 swine, 100 sheep, 150 dogs and cats. Details of the services rendered are contained in a report of the clinical department which is submitted as an appendix.

Radiodiagnostic Examinations: Many X-ray examinations have been made and found to be of great value in ascertaining abnormalities unrecognized by other means.

Examination of Seminal Fluid: An increasing number of semen samples from stallions and bulls have been examined for sterility or genital disease interfering with reproductive functions.

Diseases of Fur-bearing Animals: Extension work has been undertaken in the diagnosis and control of diseases on fox and mink ranches. Over 100 fox and mink carcases from different ranches were examined during the past year. The majority had died as results of feeding tainted food. Special reports on Food Poisoning and Septic Arthritis in Foxes and Mink are appended separately.

Bang's Disease (Contagious Abortion): Extension work has been carried on for the control of this disease in cooperation with owners and their veterinarians under the following plans:

Plan A—By testing the herd and removing the reactors.

Plan B—By testing the herd and segregating the reactors separately.

Plan C—By the adoption of calfhood vaccination.

A total of 128 herds, comprising 4,450 cattle, were included under these plans and the results are described in a separate report which is appended.

Experimental Control of Mastitis: This extension work was arranged to determine the possibility of developing a field plan for the control of Mastitis in dairy herds. Eighteen herds comprising 283 cows were included in the plan. The details are given in a separate report as an appendix.

Biological Laboratory Service

Preparation of Antigen: Eighty-two thousand nine hundred test doses of *S. pullorum* antigen and positive and negative control sera were prepared and supplied to registered veterinarians for the agglutination test for *S. pullorum* infection. Eleven thousand six hundred and ten test doses of *Br. Abortus* antigen were distributed to qualified veterinarians for the agglutination test for Infectious Abortion of cattle (Bang's disease).

Joint-Ill Vaccine: A polyvalent vaccine was prepared for the inoculation of pregnant mares for the prevention of Joint-Ill in the foal. Sufficient vaccine was distributed for the treatment of 850 mares.

Serological Tests: These are commonly known as blood tests and are widely used for the diagnosis of Infectious Abortion in cattle (Bang's disease). During the year, 26,487 blood samples were submitted to the agglutination test for Bang's disease. Included in this number were 2069 blood samples from cattle intended for export or for exhibition purposes.

The results of these tests are as indicated in the following table:

Number of samples tested	26,487
Number positive	3,925
Number doubtful	1,043
Number negative	21,265
Unfit for testing	254

Poultry Laboratory Service

This consists chiefly in the routine examination of diseased poultry sent or brought to the laboratory. No serious outbreaks of disease were encountered, but the incidence of coccidiosis, pullorum disease of chicks and nutritional ailments remains at about the same level. In a great many instances these conditions could have been prevented if proper control measures had been employed.

Advice is always given as to the handling of the flock to prevent the spread of infectious diseases.

The number of specimens received during the past year is greater than that of the previous year and the diseases dealt with are shown in the following list:

Disease or Condition	Number of Cases
Adult Pullorum Infection	80
Ascites	9
Avian Diphtheria	14
Coccidiosis	343
Colds and Roup	65
Enterohepatitis (Turkeys)	45
Enterohepatitis (Chicken)	45
Enterohepatitis (Other Birds)	3
Fowl Cholera	43
Laryngo-tracheitis	32
Leucosis	96
Pullorum Disease of Chicks	443
Tuberculosis	30
Other Infections	32
Torsion or Volvulus	3
Egg Bound	2
Internal Laying	16
Enteritis	41
Ruptured Oviduct	3
Impaction	5
Injuries	22
Nutritional Conditions	289
Prolapse	4
Ruptured Liver	15
Tumours	48
Worms (Ascaridia)	67
(Capillaria)	24
(Large Tapeworms)	68
(Minute Tapeworms)	56
(Round and Tapeworms)	56
No Evidence of Disease or Putrid	132
Total	2131

General Laboratory Service

This work involved the preparation and microscopical examination of over 750 tissue specimens, the majority of which were from cases of Joint-Ill, malignant growths, bacterial and parasitic diseases. In addition laboratory examination was made of samples of water, milk, meat and other food products. During the year specimens were received and examined as indicated in the following tables:—

Pathological and Bacteriological Examinations

Nature of Case	Cattle	Sheep	Horses	Swine	Dogs	Cats	Rabbits	Birds	Goats	Fox	Mink	Water	Feed Samples	Meat	Totals
Parasitic Infestation	3	5	5	4	6			2	2	1					28
Coccidiosis	7						1				1				9
Neoplasms	15		12	1	37	2		1							68
Pasteurella Infection	8	10		43		1	1	3			1				67
Brucella Infection	6		1												7
Necrophorus Infection	3	1	1	6											11
Suipestifer Infection				4											4
Influenza				8											8
Blackleg	8														8
Erysipelas				8											8
Scours of Newborn	6			31											37
Joint-Ill (Foals)			66												66
Abscess	6		4		6										16
Pyemia, Septicemia	4			6	3			2		4					19
Metritis	2	1	1												4
Mastitis	162			5											167
Hepatitis	8		2							1	2				13
Pericarditis	4														4
Pneumonia	7	1	1	1	1	1				4	10				26
Gastritis and Enteritis	9		1	14	5	6	1				2				38
Nephritis, and other Kidney Diseases	13	7			1										21
Tonsilitis					3										3
Conjunctivitis					5										5
Distemper					1	2									3
Tuberculosis	3		1												4
Actinomycosis	4			1											5
Actinobacillosis	3														3
Food Poisoning, Botulism			3					2		6	5				16
Encephalomyelitis			15												15
Deficiency Diseases		3		5							1				9
Urine Tests	3		2												5
Haemoglobinuria	52														52
Blood Examination, Anemia, Etc.	18		4	51											73
Hodgkin's Disease					2										2
Seminal Fluid	2		1												3
Milk Samples	200														200
Chemical Poisoning	2				5	2									9
Miscellaneous	7	1		4	4			46		1		9	4		76
Total	565	29	120	192	79	14	3	56	2	17	22	9	4		1112

Throughout the year an immense volume of correspondence has received attention, as well as daily personal interviews with those seeking advice. The demand for veterinary services, including research and extension work, has noticeably increased.

The scope and extent of work of this nature has naturally to be kept within the means at our disposal and cannot be increased without additional help, better facilities, and a greater appropriation. It would appear that to adequately meet the needs a definite animal diseases research and investigational branch would be fully justified, and should be created with sufficient staff, laboratory and farm facilities, and sufficiently endowed to enlarge this service along broader lines throughout the Province.

During the college session the entire staff have been kept busily engaged and have performed their duties in a diligent and competent manner. A high standard of efficiency has been maintained in all departments and at a minimum cost to the Province.

All of which is respectfully submitted.

C. D. McGILVRAY,
Principal.

Guelph, Ontario,
March 31st, 1939.

THE CONTROL OF BANG'S DISEASE (CONTAGIOUS ABORTION)

C. D. McGilvray, M.D.V., D.V.Sc.

The control of Bang's Disease at the present time is essentially an individual problem in many herds. Generally speaking, herds may be regarded as coming under two main groups:

1. Herds which are free from the disease.
2. Herds which are affected.

Herds which are free from the disease: These herds should prove negative to the agglutination test (so called blood test) and every possible precaution should be taken to prevent them becoming infected. Owners of such herds should consult the Health of Animals Branch, and they will be advised as to the conditions under which they may have their herds supervised and listed as negative herds free from Bang's Disease.

Herds which are affected : In the case of affected herds, the progress of the disease may be regarded as occurring in three phases or stages:

A—*The Introductory Stage:* This phase represents the early period of the disease in a herd. At the beginning there may be only a few abortions. It is an opportune time to have the herd tested and the reactors removed.

B—*The Spreading Stage:* During this period the infection is becoming more widely disseminated in the herd. This phase of the disease is manifested by an increase in the abortion rate, and the test may reveal the majority of the herd to be infected. The owner may be unable to adopt a radical plan of dealing with the reactors and it may not be an opportune time to advocate it.

C—*The Regressive Stage:* During this period of time the disease has become chronic in the herd. This phase of the disease is of long duration and continues indefinitely. When a herd of this kind is tested, many of the adult cows may react although their breeding record may be fairly consistent. The abortion rate may then be more noticeable among the young females during their first or second pregnancies.

Plans Under Which Affected Herds May Be Handled

The College will cooperate along the following lines with owners and their veterinarians:

Eligible herds must contain ten or more pure bred animals and be under the supervision of a qualified veterinarian. An arrangement may be made whereby half the cost of the initial test of the herd will be borne by the College and the other half by the owner on the basis of twenty-five cents for each animal tested, plus six cents per mile car mileage to and from the owner's premises. The cost or expense of additional visits of the attending veterinarian will require to be borne by the owner. The purpose is to obtain a few suitable herds in selected districts for demonstration purposes.

Method of Procedure: The first step is to have the herd tested to determine which of the following plans might be the most suitable.

Plan A: This plan is recommended in the case of herds where the disease is in the Introductory Stage, or where 10% or less of the herd reacts to the test. The reactors are required to be removed from the herd and the remainder retested at intervals of 30 days until the herd is negative. New additions to the herd are to be obtained only from other negative herds or kept segregated subject to retest. The premises require to be thoroughly cleaned and disinfected from time to time, after removal of reactors. Arrangements should then be made to have the herd placed under the regulations of the Health of Animals Branch in order to have it ultimately listed as a negative herd.

Plan B: This plan is recommended in the case of herds during the Spreading Stage or in which the disease is acute or in which more than 10% of the herd has reacted to the test. It is intended to handle a herd of this kind with the least material sacrifice of highly valuable animals and should be arranged with the view of building up a clean herd sooner or later from the non-reactors and the offspring (or natural increase) and additions of blood tested negative animals. This plan may entail the keeping of the reactors and non-reactors as separate units until the herd has been developed to the point where the reactors can be eliminated from the premises. This should be done as rapidly as conditions will permit so that steps may be taken to have the herd ready for supervision under the Health of Animals Branch. It is possible that in some herds calfhood vaccination may also be availed of as a means of protecting young heifers in the herd during their first pregnancy.

Plan C: Calfhood Vaccination: This treatment is now being advocated in the case of herds where the disease is of long standing and has reached the Regressive Stage. It is still regarded as being in the experimental stage, but is claimed to have shown promising results in some herds. The vaccine used is known as Cotton's No. 19 Strain of low virulence. It is recommended to be used in the treatment of calves between four and eight months of age. The hope is that it may protect them during their first and second pregnancies, and thus aid in lessening the abortion rate. The Department has authorized the use of this plan in a number of selected herds as a practical experiment. Following vaccination the calves will be tested at monthly intervals for as long as may seem desirable, or until they become negative.

The actual results of the plan will only be correctly determined after the calves have reached mature age and have passed through several pregnancies. This will require herds being kept under supervision and experimental control for a number of years.

PRELIMINARY PROGRESS REPORT

During the year a total of 26,487 blood samples from herds throughout the Province were submitted to the agglutination test for Bang's Disease with the following results:

Total number of cattle blood samples tested		26,487
Total number of cattle blood samples negative	21,265	
Total number of cattle blood samples positive	3,925	
Total number of cattle blood samples doubtful	1,043	
Total number of cattle blood samples hemolysed	254	

A selection was made of 128 herds, comprising 4,450 cattle, for demonstration purposes under the foregoing plans with the following results:

Under Plans A and B: Under these plans 83 herds were included comprising a total of 2,496 cattle. The results of the initial test were as follows:

Number of cattle tested under Plans A and B			2,496
Number of cattle negative	2,296	(Approximately 92%)	
Number of cattle positive	124	(Approximately 5%)	
Number of cattle doubtful	76	(Approximately 3%)	

Following the initial test the reactors were removed and the doubtful ones segregated. The owners were then notified to have their herds placed under the supervision of the Health of Animals Branch for further tests in order to have them established as negative herds.

Under Plan C: Under this plan calfhood vaccination was employed. There were 45 herds included comprising a total of 1,954 cattle. Results of the tests before vaccination were as follows:

Number of cattle tested under Plan C			1954
Number of cattle negative	1231	(Approximately 63%)	
Number of cattle positive	625	(Approximately 32%)	
Number of cattle doubtful	98	(Approximately 5%)	
Number of calves tested between 4 and 8 months of age			356
Number of calves negative to the test before vaccination	299	(Approximately 84%)	
Number of calves positive to the test before vaccination	22	(Approximately 6%)	
Number of calves doubtful to the test before vaccination	35	(Approximately 10%)	
Number of calves vaccinated between 4 and 8 months of age			330
Number of calves unvaccinated (controls between 4 and 8 months of age)			26

Results of Tests After Vaccination: The vaccinated and control calves were regularly tested at monthly intervals. The details of the tests are, however, incomplete as yet owing to the fact that the calves have been vaccinated at different intervals of time, within a period of nine months. It is, therefore, not considered desirable to make a definite statement until all the calves have been tested over an equal period of time. So far the results indicate that the younger the calves are vaccinated, the sooner do they cease to react following vaccination, and that approximately 70% ceased to react in from 3 to 4 months' time, and that 20% gradually cease to react in from 4 to 6 months' time, while 10% seem to persist in reacting after 6 months' time.

COOPERATIVE PLAN FOR CONTROLLING MASTITIS

Where it is desired to have a herd tested and supervised for the control of Mastitis, the college will cooperate along the following lines with owners and their veterinarians:

The herds selected must comprise ten or more pure bred milking cows to be under the supervision of a qualified veterinarian.

Under the proposed plan an arrangement may be made whereby half the cost of the initial test, and a second test of the herd in thirty days, will be borne by the college, and the other half by the owner, on the basis of 50c for each cow examined, plus 6c per mile car mileage to and from the owner's premises. The cost or expense of additional visits of the attending veterinarian to be borne entirely by the owner.

The college will further cooperate by furnishing the veterinarian with a complete outfit comprising reagents and apparatus to conduct the bromthymol blue and chloride tests; by analysing the test results, and by making laboratory examinations, without charge.

Instructions For Conducting Herd Tests For Mastitis

Four field tests will be employed by the attending veterinarian; viz.: the clinical examination of the udder, the strip cup test, the bromthymol blue test, and the chloride test.

Method of Procedure: The teats must be thoroughly cleansed, using a fresh, clean cloth for each cow. The milk from each teat to be tested separately.

Strip Cup Test: A few streams of milk from each teat are drawn into the strip cup, and the screen or mesh is examined for flakes, and if any are noticed it is an indication of Mastitis.

Bromthymol Blue Test: Sufficient milk (5 cc.) is drawn from each teat to reach the mark on each test tube, and mixed with the bromthymol blue contained in the tube.

Interpretation of Results: Normal milk gives a yellow colour, while abnormal milk ranges from light to dark green.

Chloride Test: Sufficient milk (5 cc.) is drawn from each teat to reach the lowest mark on each test tube. 8 to 10 drops of the 10 per cent. solution of potassium chromate are then added which will give the milk a canary yellow colour. The twentieth normal solution of silver nitrate is then added up to the second mark on the tube and mixed with the milk.

Interpretation of Results: The immediate appearance of a reddish colour indicates normal milk. If this colour change does not occur, add the silver nitrate solution up to the next mark or to the top mark, and make a record as to whether the milk changes colour or remains yellow. Keep all reagents cool and in a dark place.

Laboratory Examination: When samples are required to be sent to the

College for a bacteriological examination they shall be taken under strict aseptic conditions. The udder shall be thoroughly cleansed, using a fresh clean cloth for each cow, and the teats dipped in a 5 per cent. sodium hypochlorous acid solution. A separate lot of this solution is used for each cow. The entrance to each teat canal is to be cleansed with alcohol. Each sample must be correctly labelled, packed in ice and saw dust and forwarded immediately so as to arrive at the laboratory as quickly as possible.

Physical Examination of the Udder: The udder is first milked and examined while empty. Each quarter of the udder is then thoroughly palpated, and fibrosed areas, induration or other abnormality noted and recorded.

The Systematic Control of Mastitis:

(a) By classifying the affected animals so that the affected and non-affected animals are milked separately.

(b) By the adoption of precautionary measures to limit the further spread of the disease, including sanitation and hygiene.

(c) By elimination of the affected animals from the herd as conditions permit.

(d) By developing a Mastitis free herd from the offspring and non-affected cows.

A bulletin on Mastitis will be supplied to those desiring additional information.

CO-OPERATIVE WORK IN AN ATTEMPT TO CONTROL THE SPREAD OF MASTITIS IN DAIRY HERDS

By J. S. GLOVER, V.S., B.V.SC.

An interim report of a programme of work commenced last summer is presented.

Co-operation between the herd owner, the local veterinarian, and the laboratory was arranged for, and eighteen herds containing two hundred and ninety-eight cows, were used in the investigation. Of these one hundred and sixteen cows have been examined twice, and fifty-one cows three times.

Four field tests were employed by the veterinarian—physical examination of the udder, strip cup test, bromthymol blue test and chloride test. These were checked in most instances by laboratory examination of samples of milk drawn at the same time.

It was found in connection with the physical examination of the udder that there was a great difference of opinion among clinicians as to what constituted an affected quarter. Some could apparently detect abnormalities in quarters that were, in the opinion of other clinicians, normal. It must be borne in mind, too, that some udders may have fibrosed areas that are not the result of an active pathological process, and also that such areas exist that are the result of some external injury. It is therefore of the utmost importance, when making examinations for the control of mastitis, to obtain the history of the cows and to know the duration of the present lactation period. In a few herds where the work was carefully controlled there was fairly close agreement between the physical and bacteriological examinations.

The bromthymol blue tests and bacterioligical examinations agreed in seventy-three per cent. of cases.

Earlier work in this laboratory showed that whilst the chloride test was of value in detecting mastitis infection, the normal chloride content, like the pH value, varied with different cows. For this reason, no quarter was put down as definitely positive to this test unless more than seven cubic centimetres of twentieth normal silvernitrate solution were required to produce the colour change in five cubic centimetres of milk. Samples that required more than four and not more than seven cubic centimetres were recorded as supicious until further tests were made. Fifty-one per cent. of the quarters thus classed as suspicious were negative to a bacteriological examination.

Although the writer is an advocate of the strip cup being used at every milking, the test in our investigation was of little value as only a very small percentage of infected milks showed flakes or clots on the mesh of the strip cup. Its use, therefore, was dicontinued.

It is hoped to continue the work, using fewer herds, and making more frequent examinations. A closer contact between the veterinarian and the laboratory is desirable, and a heartier co-operation on the part of the herd owner is necessary. Stricter attention will have to be paid to sanitation in the stable.

The indications are that where the advice given was acted upon, conditions in the herd are improving, although it is too early yet to come to any conclusions about the efficiency of the plan. As only a limited number of bacterioligical examinations can be made by any laboratory, and as the number of herds affected with mastitis is enormous, it is still our hope that by the careful use of some of the field tests, and an intelligent interpretation of results obtained, the spread of the disease may be controlled to a greater extent than it has been in the past. Success lies chiefly in our becoming more conversant with the reasons for the discrepancies of the various tests and a greater appreciation of the limitations of each one.

A REPORT ON THE INVESTIGATION INTO SUSPECTED OUTBREAKS OF ENCEPHALOMYELITIS DURING THE SUMMER AND FALL MONTHS OF 1938

By FRANK W. SCHOFIELD, D.V.SC. AND H. R. POTTER, B.V.SC.

With encephalomyelitis steadily spreading into new and uninfected territory both in the United States and Canada, it would be unreasonable to expect that the Province of Ontario would for long escape from invasion by this serious disease. Realizing this we have been on the alert for evidence of infection, and although a number of suspected brains have been examined during the last few years none had shown the changes typical of encephalomyelitis. While virus carriers have never been discovered among horses, it is possible that such do exist, so that the yearly influx of horses from the diseased ridden areas of the West into Ontario has been a cause for real concern. As early as 1936 cases of encephalomyelitis were reported from Northern Ontario, at the Manitoba border, the disease undoubtedly had spread across the border into Ontario. No cases, however, had been reported from other districts of the Province.

During the past summer reports of cases and small outbreaks came from several widely separated districts in central and southern Ontario. This report deals with two outbreaks, one which occurred in the Niagara Peninsula and the other in the vicinity of St. George. Suspected cases were also reported from Erin, Shelburne and Waterloo.

THE NIAGARA OUTBREAK

The first case seen by Dr. Potter, Niagara Falls, occurred on July 23rd, 1938. The last case of the disease developed on October 12th, 1938. During this time a total of twenty-seven cases of the disease were diagnosed. Mention will be made later of the fact that many sub-clinical cases most likely occurred.

The occurrence of typical cases which closely resembled the so-called X disease of Marsh[1] were encountered during the epizootic. This peculiar disease will be considered separately at the end of the report.

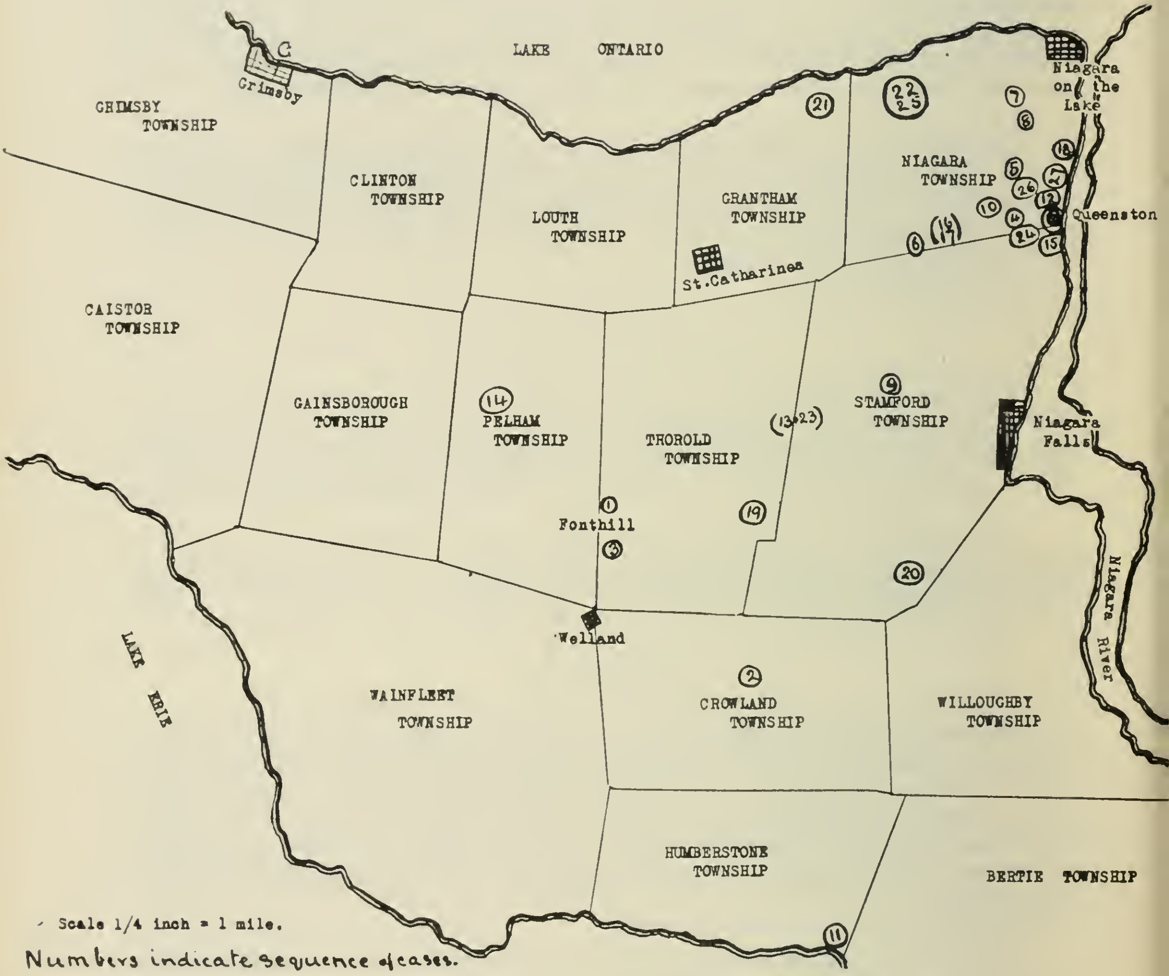
EPIZOOLOGY

Careful investigation has failed to reveal either the original source of the infection or the way in which the disease was transmitted from animal to animal. While strong suspicion rests upon Western horses as the source of infection, yet such a supposition is at present far from being proved. True, most of the cases were in Western horses, or in horses stabled beside Western horses, but the evidence incriminating the Western horses is quite inadequate and purely circumstantial.

The first case on July 23rd, 1938, was in a Western mare which had just arrived in the community, and was still on the premises of the dealer who is a large importer of Western horses. The second and third cases occurred within twenty-four hours and on widely separated farms, which precluded the possibility of contact either with each other or with a common source of infection. In other words, the disease seemed to break out spontaneously at several different points.

A study of the accompanying map reveals the fact that about one half of the cases occurred in the township of Niagara. No adequate explanation can be offered for this concentration of infection.

The twenty-seven cases represent twenty-four infected farms, and in three instances two cases occurred on the same premises. Thus in the great majority of cases, one horse only, out of a group of four or five horses suffered from clinical infection. It would, we believe, be safe to say that for every clinical case there is most likely one sub-clinical case.


LAKE ONTARIO
G
Grimsby
GRIMSBY TOWNSHIP
CLINTON TOWNSHIP
LOUTH TOWNSHIP
GRANTHAM TOWNSHIP
St.Catharines
NIAGARA TOWNSHIP
Niagara on the Lake
Queenston
CAISTOR TOWNSHIP
GAINSBOROUGH TOWNSHIP
PELHAM TOWNSHIP
THOROLD TOWNSHIP
STAMFORD TOWNSHIP
Niagara Falls
Fonthill
Welland
LAKE ERIE
WAINFLEET TOWNSHIP
CROWLAND TOWNSHIP
WILLOUGHBY TOWNSHIP
Niagara River
HUMBERSTONE TOWNSHIP
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Scale 1/4 inch = 1 mile.

Numbers indicate sequence of cases.

The role of insects and birds in the spread of infection. A study of the epizoology of this outbreak would cause one to suspect either insects or birds as being most important agents in the spread of infection, rather than contact between sick and healthy animals. In fact in one instance, that of a fruit farm, no horse had either entered or left the premises for several months, yet one of a team came down with a fatal infection.

There was only one case which suggested the probability of infection being carried from one farm to another by the direct agency of an infected horse. In this instance, the team mate of a horse which had died of the disease was moved to another farm several miles distant. Ten days after the arrival the horse came down with typical encephalomyelitis and died. Twelve days after the death of this animal the horse which was standing in the next stall became ill and died with encephalomyelitis. (These three cases were later placed in the category of 'X disease').

While spread of the infection may be attributed to biting flies and mosquitoes which are unusually plentiful and persisted on until the end of October, due to the absence of severe frosts, yet the source of the infection remains a mystery.

The important discovery of Fothergill[2] that the disease occurs spontaneously in pigeons, and the finding of infected pheasants by Tyzzer[3], must be given careful consideration as possible sources of infection. Inquiry made as to mortality among the local pheasants and pigeons would indicate the absence of disease in these birds. The fact that experimental disease has been produced in a number of the common migratory birds is significant, and suggests the possibility of their role as carriers of infection. It is difficult to account for some of the isolated case of the disease on the basis of insect transmission, which could be readily accounted for if birds may be considered as both sources and carriers of infection.

Investigation of the St. George outbreak produced similar negative results as far as the epizoology of the disease was concerned. The importation of Western horses as a source of infection could be eliminated, as few had been brought into the territory, and the cases occurred in native horses which had not contacted the Western imports.

SYMPTOMATOLOGY

The symptoms observed corresponded with those which have now become generally recognized as characteristic of encephalomyelitis. The chief symptoms are attributable to irritation of the central nervous system. All cases could be included in the two main categories of 'maniacal' or 'lethargic'. Some showed a combination of these symptoms, or passed from one type to the other as the disease progressed.

An elevation of temperature varying from 102° F. to 107° F. was present in the early stages of most cases except those which have now been grouped under 'X disease'. The presence of increased temperature is undoubtedly one of the most important symptoms from the standpoint of diagnosis. Hyperaesthesia especially in the skin of the head is constantly present, and is evidenced by a dislike to the head being handled. In many cases even the stroking of the nose or patting of the neck is irritating. Incoordination of movement is manifested early in the disease and results in an unsteady or staggering gait. Stumbling and dragging the feet are other signs of nervous debility. Quite early in the disease the affected animals would show either a complete disclination to eat, or difficulty in prehension and swallowing food. Paralysis of the muscles of the lips caused a drooping or looseness of these organs. In some cases the upper lip was drawn to one side due to facial paralysis. Muscular twitching was commonly seen and occurred in almost any muscular group. There was no characteristic change in the pulse—the rate being accelerated. A peculiar ridging of the abdomen as might be seen in peritonitis was present in most cases. In some of the early per-acute cases the urine was dark in colour as if it contained haemoglobin.

As the disease progressed the animal became rapidly weaker and unable to stand. The animal might lie quietly or show great excitement, thrashing with the legs and pounding the head on the ground. Death was usually due to progressive paralysis. Among minor symptoms might be mentioned frequent yawning, a tendency in some cases to walk in circles, or blindly ahead. Obstinate constipation was commonly present. The temperature usually dropped to normal or sub-normal after the first day or two. Jaundice was a constant feature of the disease which would indicate that the virus causes damage to the liver tissue. Death usually occurred in from eighteen hours to four or five days.

Immunization. As soon as the disease had been definitely diagnosed as encephalomyelitis the question of immunization had to be considered. This was a difficult matter as no virus had been isolated, hence the type was unknown so that specific treatment for the time being was impossible.

On July 25th just two days after the diagnosis was made bi-valent serum was given to a number of horses which had been exposed. One week later it was decided to use the Western type vaccine in exposed horses, as the virus was believed to have come with the horses imported from the Canadian West. Two hundred and fifty horses were completely immunized, and one hundred more were given a single treatment. Among these animals no less than six came down with either encephalomyelitis or 'X disease' after the full treatment was completed. Three of the six recovered, which is about the same mortality as among the unprotected. However it must be explained that four of the six horses affected were diagnosed as cases of 'X disease'. Another interesting fact is that all six had received the bi-valent immune serum from one to two months prior to the onset of the disease.

No conclusions can be arrived at as to the efficacy of the vaccine as neither the Eastern or Western type of virus was demonstrated. A virus isolated by Dr. Mitchell, Ottawa, did not correspond to either type.

The remarkable efficacy of the vaccine to protect against the homologous virus has already been amply demonstrated.

PATHOLOGY

No report of value on the pathology of the disease can be made as the early cases were studied from the clinical aspect alone by one of us—Dr. H. R. Potter. The later cases which were thoroughly studied both from the standpoint of virus infection and pathology are described separately under the title of 'X disease'.

It is important to note however that two among the first few specimens of brain tissue received at the laboratory from the Niagara district showed the pathological changes diagnostic of encephalomyelitis. One of these was forwarded by Dr. Younie, St. Catharines,, where seven suspicious cases were reported. The other came from Dr. Potter early in the outbreak and had been diagnosed clinically as encephalomyelitis.

The histopathological findings may be summarized as cuffing of capillaries, foci of cell infiltration scattered throughout the brain tissue, degeneration of the neurons and haemorrhagic foci.

Virus was not isolated from either of these brains.

OBSERVATIONS ON THE X DISEASE OF MARSH AS SEEN IN THE NIAGARA PENINSULA

Introductory Note. In the Fall of 1938 Madsen working in Utah reported a peculiar 'second outbreak' of encephalomyelitis which occurred in the same area in which a serious outbreak had developed earlier in the season. He noted certain essential differences between the early and late outbreaks.

In 1938 Marsh and his colleagues gave a detailed report of a similar 'second epizootic' which they had studied in the state of Montana. This 'second epizootic' has been reported on by other observers and has been temporarily designated as 'X disease', indicating its unknown nature.

The chief characteristics of 'X disease' may be stated as:—an epizootic which follows an outbreak of encephalomyelitis, never occurring as an independent disease; absence of temperature; very sudden onset; profuse sweating; paresis of bowel; rapid course of the disease, and great tendency to cereberal excitement. To this must be added the absence of significant histopathological change in the brain and chord, severe damage to the liver, and the absence of virus in the central nervous system.

From this brief statement it can readily be seen that 'X disease' has certain distinctive features which clearly separates it from typical encephalomyelitis.

Epizoology. It is not possible to state the date of the first case of 'X disease', but Dr. Potter in whose practice the outbreak occurred, and who was the attending veterinarian in every case, noticed a change in the symptomatology as the epizootic progressed. The first six cases occurred at intervals of two or three days, then came a lull of three weeks from August 2nd to August 23rd during which time only one new case developed. From August 23rd to October 5th when the epizootic was practically over, there were nineteen cases, or an average of a new case every other day. (One case of 'X disease' occurred on October 12th). Seven of the nineteen cases were undoubtedly cases of 'X disease', as clinical and laboratory findings were in complete agreement. On clinical grounds alone seventeen of the nineteen were considered as cases of 'X disease'.

Date	Total Number of Cases	Cases Diagnosed as X Disease	Cases Diagnosed as Encephalomyelitis	Doubtful
Aug. 2nd	6	0	5	1
July 23rd to Aug. 12th	1	0	1	0
Aug. 23rd to Oct. 3rd	19	17	1	1
Oct. 12th	1	1	0	0

Mortality in X disease—66%.

Mortality in Encephalomyelitis—63%.

Anti-encephalomyelitis Serum and 'X disease'. The view is held by some veterinarians that the use of immune serum has a tendency to make an animal susceptible to 'X disease'. While it is true that all but one of the seven demonstrated cases of 'X disease' had received the serum and later the vaccine, yet one typical case had received no treatment. Three cases diagnosed as 'X disease' on clinical evidence alone had received no protective treatment. Also several hundred horses in the vicinity had received the serum and vaccine and remained perfectly well. We see no reason at present for pressing the relationship between the serum and the disease.

Age and the incidence of 'X disease'. Marsh emphasizes the fact that 'X disease' is more prevalent in older horses. This was not characteristic of our cases. Both groups contained young and old horses in about the same proportions.

Symptomatology. The symptoms observed by us correspond remarkably closely with those given by Marsh and already tabulated. The suddenness of onset was very characteristic, an animal showing nothing more than slight dullness and disinclination for food in the morning, might be acutely ill by the evening. There was no slow but progressive paralysis as in encephalomyelitis, but along with definite incoordination of movement there was a great desire to keep moving either blindly surging ahead or if on the halter alternating this by heavily hanging back on the rope. Severe jaundice was a constant characteristic and quite possibly accounted for some of the cerebral symptoms. The absence of temperature was undoubtedly the most significant of differentiating symptoms.

PATHOLOGY OF 'X DISEASE'

The findings recorded are based upon five complete post-mortem examinations as well as specimens of tissue forwarded to the laboratory from three additional cases. The tissue changes were so constant in these cases that we feel confident in reporting them as being characteristic of the disease as it occurred in this outbreak.

Gross pathology. On opening the peritoneal cavity an increase in fluid was observed. Delicate strands of fibrin were present in some cases, especially noticeable on the diaphragmatic surface of the liver, or loosely attached to the loops of bowel. Petechial haemorrhages may be present in the peritoneum.

The *stomach* showed no definite change; slight hyeraemia was present in several cases. The *duodenum* and *jejunum* appeared normal. The *ileum* was frequently the seat of acute inflammation which extended into the *cecum* and *colon*. In one case there was also extensive inflammation of the mucous membrane of the *floating colon*. The *liver* in all cases showed evidence of severe damage. The colour was pale, the surface was mottled and the texture friable. The *spleen* was slightly swollen, the pulp increased in quantity and was dark and soft. The *kidneys* did not show characteristic change. The visceral lymph glands were normal. The *bladder* in two cases showed extensive ecchymosis and petechial haemorrhages in the sub-mucosa.

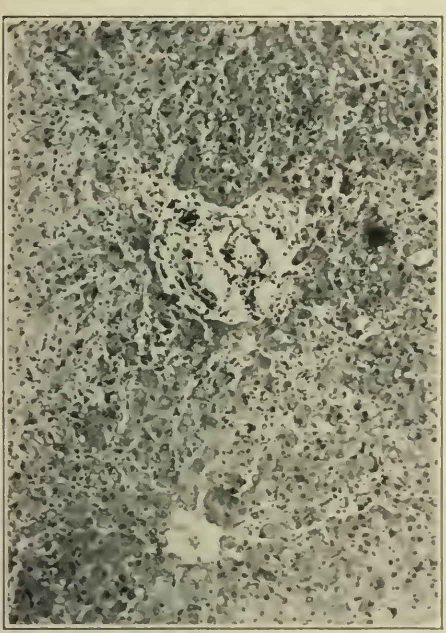
The *lungs* and *heart* showed no significant changes. Petechiae and ecchymoses may be present on the epicardium. There is an increase in the pericardial fluid.

In most cases the retro-pharangeal lymph glands were acutely inflamed. This was related to an acute inflammation of the pharynx, which usually had spread to the larynx. (*Shigella viscosa* was present in almost pure culture in two cases).

The *brain* appeared normal except for softening in some cases. The cerebro-spinal fluid was increased in some cases and blood tinged. In two cases the pituitary gland was swollen, oedematous and haemorrhagic.

The carcass usually showed marked evidence of jaundice.

Histo-pathology. The *liver;* in all cases the hepatic cells are severely damaged. This varies from numerous foci of cloudy welling in the early stages to extensive necrosis. In several cases the greater part of the liver tissue has undergone necrosis; the few remaining cells at the periphery of the lobule showing fatty degeneration and cloudy swelling. Throughout the necrotic areas globules of fat and deposits of bile pigment are to be seen. In one case the necrosis was accompanied by extensive haemorrhage. Marked cellular infiltration is present; the invading cells being concentrated in the inter-lobular connective tissue. Most of the infiltrating cells are of the large and small lymphocytic type. Polymorphonuclear leuocytes are present in small numbers throughout the parenchyma. The picture closely resembles that of acute yellow atrophy.



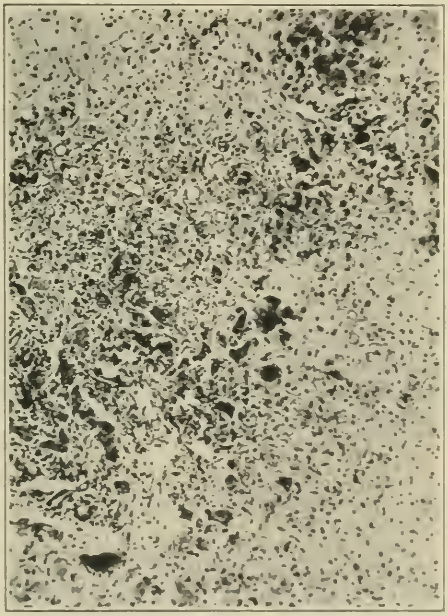


Photo by V. R. Brown

Early lesions, showing cloudy swelling, pyknosis, fatty degeneration, limited necrosis and slight round cell infiltration.

Late lesions, showing extensive liver necrosis; a few small groups of degenerate cells remain.

The *kidneys* do not show severe damage. Cloudy swelling of the epithelial cells of the convoluted tubules is commonly seen. Similar lesions appear in the collecting tubules of the medulla when necrosis and haemorrhage may also be present. In one case many of the glomeruli showed acute degenerative change.

The *spleen* in all cases showed numerous large and small haemorrhagic foci.

Sections of tissue from the *large and small intestine* showed well marked enteritis with necrosis of the tips of the villi and desquamation of the epithelial cells into the depth of the crypts.

The *brain.* Apart from scattered petechial haemorrhages degenerative changes alone were observed. In some cases the Purkinje cells of the cerebellum showed severe degenerative change. Of chief significance is the fact that there is no cell infiltration which is so characteristic of the brain in encephalomyelitis.

The true nature of 'X disease' remains a mystery. There can be no doubt that it has a direct relationship to encephalomyelitis, as it has only been reported as occurring either during or after an outbreak of that disease. We incline to the view that the disease is due to the virus of encephalomyelitis, which has increased in vicerotropic tendencies and decreased in its neurotropism. Adequate attempts have not yet been made to isolate the virus from the abdominal viscera and ingesta in 'X disease'. Against this view is the fact that the absence of temperature would indicate an intoxication rather than an acute infection. Also the pathological change in the liver apart from cell infiltration are more suggestive of intoxication than infection. On the other hand, the presence of enteritis and in some cases peritonitis strongly suggests infection. The severe hepatic degeneration may be the result of the enteritis and toxaemia.

ANIMAL INOCULATIONS

Horses, guinea pigs and mice were used in experiments to determine whether the virus was present in cases of 'X disease'.

Guinea pig and mice inoculations. Brain tissue from seven of the eighteen cases which were diagnosed clinically as 'X disease' was used in guinea pig and mice inoculation tests. An average of six guinea pigs and six mice were used in these tests, an intracerebral inoculation being made of a small quantity (.02-.03 cc.) of a 10% suspension of brain. In two of the seven cases studied the sick horses had been destroyed in the latter stages of the disease in order to secure perfectly fresh material. In the remaining cases the tissue was preserved in Sorensen's fluid, inoculations being made within a few days. In several cases contamination necessitated the filtration of the tissue before inoculation.

In no case did an experimental animal show symptoms of encephalomyelitis.

Horse inoculations with tissue and blood from 'X disease'. Two horses inoculated intro-cerebrally with brain tissue, died from cerebral abscess, caused by *Cl. welchii.* The brain in both cases had been removed a few hours after death and filtration of the tissue could not be made as the inoculations were performed in the field at quite a distance from the laboratory. A third horse given a similar inoculation of brain from another case remained well.

A suspension of liver and spleen from two typical cases was injected both subcutaneously and intravenously and fed per-orum to an experimental horse with negative results. This animal was also fed large quantities of ingesta which had been collected as post-mortem from the same cases. Blood collected in citrate solution from two cases was injected both intravenously and subcutaneously into a healthy horse with negative results.

Our negative results from animal inoculation tests are in agreement with those of other investigators.

SUB-CLINICAL CASES OF 'X DISEASE

During the investigation it was noticed on one occasion that two horses which were stabled along side a case of 'X disease' showed mild jaundice. They appeared normal in every other way. A fourth horse in the same stable showed no evidence of jaundice. Samples of blood were taken from all of the horses and bilirubin estimated by the van den Bergh test. This revealed the interesting fact that the two slightly jaundiced horses had 2.6 and 5.0 van den Bergh units respectively, while the diseased horse showed 17.0 units and the control horse .6 units. Within twenty-four hours one of the two jaundiced horses came down with a typical attack and died in forty-eight hours. In another instance, a sample of blood taken from the team mate of a horse which had died two days previously showed 10.0 van den Bergh units. This animal did not show any clinical evidence of disease, apart from the jaundice, and was being worked as usual. (Normal bilirubin for the horse—.5 to 1.8 van den Bergh units).

The frequency with which jaundice occurs in both encephalomyelitis and 'X disease' would indicate that the liver suffers damage in both of these diseases. Samples of blood taken several weeks after recovery, in either of these diseases, may show a high bile content.

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ACKNOWLEDGMENTS

Much of this work was done in co-operation with Drs. Seymour Hadwen and Ronald Gwatkin of the Ontario Research Foundation. Their assistance in this investigation is gratefully acknowledged.

REPORT ON CASES OF SUSPECTED ENCEPHALOMYELITIS OCCURRING IN THE VICINITY OF ST. GEORGE

By FRANK W. SCHOFIELD, D.V.SC. AND N. LABZOFFSKY, B.S.A.

A small outbreak of encephalomyelitis was reported during the Fall months by Dr. J. Lawrason, St. George. There were twelve cases with two deaths, which reveals the mild nature of the disease. Another death among these cases was due to complications arising out of the encephalomyelitis, but not directly due to the disease.

One noteworthy feature of these cases is the fact that four of the twelve occurred during the month of November. Due to the unusually mild Fall mosquitoes and biting flies were still plentiful until late October. However, as none of the later cases were fatal the diagnosis was not verified by laboratory methods.

Three cases only were seen by the writer and two of these showed typical symptoms although the disease was unusually mild. The latter were two of three cases which occurred on the same farm, and during the same month. The first on October 2nd, the second on October 18th, and the third on October 21st. All showed similar symptoms so that the case history of one alone will be given. This animal has been selected partly because of the added interest due to the isolation by blood culture of a virus.

History. The subject was a two year old colt which had been at pasture all the summer with free access to the barnyard.

October 21st. Noticed to be dull and standing listlessly in the barnyard. There was complete anorexia, temperature 106.8° and pulse 90. While walking there was no staggering, but the feet were dragged and the animal stumbled. There was definite hyperaesthesia, especially of the skin covering the head. Stroking the skin or patting the cheek was disliked and avoided.

October 22nd. Temperature 106.5°, pulse 76, and condition just about the same, but eating a little hay and oats. No difficulty in swallowing. The colt was depressed and laid down much of the time, resting the head by the chin on the floor. On rising the patient staggered as if weak.

Blood was taken from the jugular vein and injected directly into the peritoneal cavity of guinea pigs. Five cc. was injected into each pig. Four of the six later developed a high temperature and from both blood and brain a virus was grown in chick embryo.

October 24th. Condition much the same. Temperature 105° F., pulse 84, nibbling a little hay and drinking a little water. When walked showed marked incoordination. Stands or lies with the eyes closed and the head resting. Blood count showed W.B.C. 8,200, and R.B.C. 8,500,00. Slight jaundice present.

October 26th. Much improved; walks without staggering, is brighter and appetite improving. Temperature 101.4°, pulse 56.

October 27th. Greatly improved; eating well with temperature 100.5° and pulse normal. No further observations were made, the colt made a complete recovery.

The St. George Virus

Isolation. As previously mentioned guinea pigs were inoculated intraperitoneally with blood from the colt on the second day of the disease while the temperature was still elevated. The blood was taken from the horse and injected immediately into guinea pigs. Daily temperature readings were made; the earliest rise was on the fifth day, the other pigs showing temperature on the sixth and seventh days. The temperature varied from 103° to 106.1° F. Those showing temperature manifested other symptoms of sickness such as anorexia, stupor, loss of weight and ruffled hair. The affected animals were killed, the brains removed and either frozen or placed in Sorensen's fluid. Filtrates of saline suspensions made from these brains killed chick embryos in twenty-four hours, but usually caused only a temperature rise and constitutional symptoms in the guinea pig.

Blood from one of the affected guinea pigs was filtered and inoculated into the membrane of a nine day chick embryo; death followed in twenty-four hours. Hemorrhage was present in both the membrane and the embryo. The hemorrhage was not however as severe as in embryos infected with either the Eastern or Western strains of virus.

Typing of the St. George Virus. The virus when first isolated showed very low pathogenicity for the guinea pig. As previously stated, in the pig sickness accompanied by high temperature was the usual result of virus inoculation. In two or three days the temperature subsided and the pig completely recovered. The virulence of the virus was however greatly heightened by passing through chick embryo. The virus at present regularly killing the guinea pig in dilutions of .001 cc. chick embryo when given intra-cerebrally.

The relationship if any between the St. George virus and the Eastern and Western strains has not yet been fully determined. Guinea pigs which had recovered from infection with St. George virus did not show any immunity to either the Eastern or Western strain.

Neutralization Tests. Neutralization tests have been made, the results of which show the St. George virus to be distinct from the Western strain but show a relationship to the Eastern strain. Further tests will have to be made before this point can be settled.

The following table gives a summary of the neutralization test using Eastern and Western immune serum against the St. George Virus.

TABLE 1

Neutralization Tests on Guinea Pigs

Test injection: 0.1 c.c. mixture of equal parts of virus and undiluted immune serum after incubation for two hours.

VIRUS		SERUM	
Type	Dilution of 20% Suspension	Western Immune	Eastern Immune
St. George	Undiluted	Died in 56 hrs. Paralysed.	Died in 96 hrs. Paralysed.
	.01 c.c.	Died due to injection.	Lived, no symptoms of disease.
	.001 c.c.	Died in 96 hrs. Paralysed.	Died, result of the injection.
.001 c.c. intra-cerebral, control pig, died in 48 hrs. Paralysed			
Western strain.	Undiluted	Died due to injection.	
	.01 c.c.	Alive; no symptoms of disease.	
	.001 c.c.	Alive; no symptoms of disease.	
.001 c.c. intra-cerebral control pig, died in 160 hrs. Paralysed			
Eastern strain.	Undiluted		Alive; no symptoms of disease.
	.01 c.c.		Died in 120 hrs., with paralysis.
	.001 c.c.		Alive; no symptoms of disease.
.001 c.c. intra-cerebral control pig, died in 56 hours. Paralysed			

Due to the inconclusive results of this test the experiment was repeated a few days later using three guinea pigs on each dilution of virus. Again the results were inconclusive.

Examination of the table shows that the Eastern serum gave a slightly longer period of protection than the Western. It would appear that the serum was unable to protect against virus in the quantities employed. Virus in greater dilutions will be used in subsequent tests

TABLE 2

Neutralization Tests on Guinea Pigs

Test injection: .0.1 c.c. mixture of equal parts of virus and undiluted immune serum after incubation for 2 hours.

VIRUS		SERUM	
Type	Dilution of 20% Suspension (chick embryo)	Eastern Immune	Western Immune
St. George	Undiluted	One pig paralysed on the 4th day. All pigs paralysed on the 5th day.	Three pigs paralysed on the 4th day.
	.01 c.c.	One pig paralysed on the 3rd day. One pig paralysed on the 4th day. One pig normal.	Three pigs paralysed on the 4th day.
	.001 c.c.	Two pigs paralysed on the 5th day. One pig normal.	Two pigs paralysed on the 3rd day. One pig paralysed on the 4th day.
Control pigs paralysed on the 3rd day (.001 cc.)			

Guinea pigs immunized against Western virus are not protected against the St. George Strain. Two guinea pigs immunized with Western 'chick vaccine' were challenged with .2 c.c. of a 20% suspension of homologous virus intracerebrally and remained unaffected. A later injection of St. George virus intracerebrally caused death with typical paralysis. This would further indicate that the St. George strain is distinct from the Western virus.

Guinea pigs immunized against St. George strain are immune to Eastern virus. This test has just been completed. Four guinea pigs were immunized against the St. George strain and then challenged with the homologous virus intracerebrally with no fatalities, indicating solid immunity. These pigs were later given an intra-cerebral inoculation of .2 c.c. of 20% Eastern virus. Elevation of temperature followed for one day only since when all the pigs have remained well. These pigs will later be challenged with the Western strain.

Guinea pigs immune to Eastern strain show protection against the St. George virus. Another experiment may be cited to indicate the existence of a relationship between the St. George virus and the Eastern strain. Four guinea pigs were immunized against the Eastern strain using chick vaccine. They were challenged with a large dose of live virus and remained perfectly well. Two of the four pigs were then injected intra-cerebrally with the St. George virus and two with the same virus but intra-peritoneally. The former succumbed, but the latter two remained perfectly well. This would certainly indicate that immunization against the Eastern strain resulted in a partial yet definite immunity against the St. George virus.

Although further tests are being made the evidence at present points to the St. George strain being closely related to or identical with the Eastern virus.

A note on additional cases. During the months of August and September Drs. Younie and Swan, St. Catharines, reported that six or seven cases of a disease simulating encephalo had occurred in their district. In all cases there were symptoms which suggested disease of the central nervous system. The chief symptoms were:—pyrexia 102-104° F., hyperasesthesia, incoordination of movement, constipation, jaundice, dysphagia accompanied by either stupor or mania. In the fatal cases death occurred in from three to four days. There was practically no possibility of direct contact between these cases.

Laboratory examination of the brain from the last case which occurred on September 12th showed histopathological changes characteristic of encephalomyelitis. The virus however was not demonstrated.

INVESTIGATION INTO JOINT-ILL IN FOALS—A SUMMARY OF THE RESULTS IN FIFTY CASES

By Frank W. Schofield, D.V.Sc. and T. Lloyd Jones, B.V.Sc., M.Sc.

Introduction

Joint-ill continues to be a serious cause of mortality among young foals, especially in certain parts of this province. As no thorough investigation of the disease had been made for many years it was thought advisable to make a careful study of the disease especially from the standpoint of its etiology. The wisdom of such a procedure is made evident by the result of our bacteriological examinations which reveal the constant presence of the *Shigella equirulis* in early acute cases. It had been falsely assumed that hemolytic streptococci were responsible for all infection. Another interesting finding was that the *Samonella abortivo equinus* which was so prevalent at the time of the last investigation[1]—1914, was not once isolated. This might have been expected as bacillary abortion in mares has not been seen for many years.

The Plan of the Investigation

In order to obtain an adequate supply of material we decided to make definite arrangements with any veterinarian who desired to co-operate with us. We offered to pay $2.50 for every foal delivered at the College within twelve hours after death. Mileage at the rate of .05c per mile was paid up to a total of $7.50. This made a maximum of $10.00 for any one foal. Genuine abortions were not accepted, nor were foals dying from disease known to be distinct from joint-ill or foal septicaemia. This arrangement worked in a most satisfactory way. To obtain samples from a distance special aspirating tubes (Kedal tubes) were supplied and $1.00 paid for each sample received.

The result was most gratifying from our standpoint, as almost all the specimens were received in excellent condition for bacteriological and pathological investigation.

Samples of mares' milk and swabs from the uterus often accompanied the foal, as we wished to determine whether we could trace the infection in the foal to either of these sources. Such samples were paid for at the rate of .25c per sample.

Sixty-three foals, thirteen samples of pus, sixteen samples of milk, seventeen uterine swabs, and four samples of urine were received at the College during the summer.

Summary of the Results

The primary objective of this investigation was the development of a more rational biological agent to be used as a prophylactic against joint-ill. This necessitated a preliminary survey of the etiology of this disease as it occurs in the province.

A detailed report of the bacteriological and pathological findings is being withheld until the results of the prophylactic immunization of mares now being undertaken, are available.

The summary which follows is based upon the data obtained from the examination of fifty foals. Thirteen foals were discarded from the group as being unsatisfactory.

Organisms Isolated With Percentage of Infection

Three different organisms were found to be responsible for almost all the infection, viz.—*Sigella equirulis; E. coli* and Hemolytic streptococci. These organisms have been incriminated as the chief causes of infection in other countries, but as pointed out, *S. equirulis* had not been recognized as a cause of joint-ill in Canada.

Table 1

Bacteriological Findings in Fifty Cases

Nature of Infection	Organisms Isolated	No.	Percentage
Infection pure	*Shigella equirulis*	16	32%
	Hemolytic streptococcus	10	20%
	Colon	11	22%
Infection mixed	*S. equirulis* and *hemolytic streptococcus*	5	10%
	S. equirulis and colon	2	4%
	S. equirulis, colon and hemolytic streptococcus.	2	4%
	Hemolytic streptococcus and colon	4	8%
Total infection pure and mixed	*Shigella equirulis*	25	50%
	Hemolytic streptococcus	21	42%
	Colon	19	38%

Two interesting and important facts are brought out in this table, viz:—First; that *S. equirlulis* causes the highest percentage of infections, this as we shall see later is in the newly born foals. Second; that colon bacilli cause a surprisingly high percentage of infection in the very young foal. We were very careful to eliminate any cases where the presence of colon might have been a post-mortem invasion.

Infection with shigella and colon do not offer much promise from the standpoint of specific prophylactic inoculation as production of immunity against these organisms is doubtful. Yet, we believe that inoculation of the pregnant mare is the only hope of giving protection to the foal, since it is apparent that most of this infection is pre-natal.

TABLE 2

TABLE SHOWING CORRELATION BETWEEN AGE OF FOAL WHEN INFECTED AND INFECTING ORGANISM

Age	Shigella	Colon	Streptococcus	Mixed Infection	
				Shigella and Streptococcus	Shigella and Colon
At Birth	7 (2)		2	1	4
12-24 hrs.	5	8	2	1	
2 days	4		1 (1)		
3 days		2	1		
4 days			(2)		
5-7 days		1	4 (1)		
8-14 days					
15-30 days			1 (1)		
Over 30 days			(1)		1

Note. Figures in parenthesis indicates that specimen was not obtained from a foal in the selected series, but was from fluid or joint sent to the laboratory.

TABLE 3

TABLE SHOWING CORRELATION BETWEEN AGE OF FOAL AT DEATH AND INFECTING ORGANISM

Age	Shigella	Colon	Streptococcus	Mixed Infection	
				Shigella and Colon	Shigella and Streptococcus
Born dead	1		1		
12-24 hrs.	2				
2 days	7	6	1	2	2
3 days	2				
4 days	2	1	1		1
5-7 days	2	2	3		
8-14 days		1			
15-30 days		1	2		1
Over 30 days			2		1

The above tables show very clearly that most of the shigella and colon infection occurs during the first few hours, if not present at the time of birth, and that death usually follows within forty-eight hours. This early infection in foals, which are almost always noticed to be 'weak' at birth, constitutes one of the major reasons for our belief that most, if not all, of these cases represent pre-natal infection.

The streptococcus infection occurs later and is of longer duration. This is in harmony with clinical experience. In general the earlier the infection the higher the mortality while later infection is frequently treated successfully.

The results tabulated above correspond very closely to those recorded in a much larger series by Magnusson[2] in Sweden; M'Fadyean and Edwards[3] in Great Britain and Dimock and Edwards[4] in the United States.

INFECTION POST-NATAL OR PRE-NATAL?

We realize that able investigators are divided on the important question "When does the foal become infected?" Some believe that practically all infection is post-natal, while others believe that most of the early cases represent intra-uterine infection. We believe that most if not all of the cases developing during the first two days are cases of intra-uterine infection. This statement is chiefly based on the following observations:—

First; that infection involving the joints as well as other organs and tissues, has been found in foals at the time of birth, and on several occasions during the first twelve to twenty-four hours after birth.

Second; that most of the foals which develop the disease during the first two days are reported as 'weak' when born.

Third; that the pathological changes found in many of the early cases especially those of the lung, kidney and synovial membranes could not have developed as post-natal lesions.

Fourth; that the *S. equirulis* has never been isolated by us from either the milk of the dam or the uterine exudate, and only once from the intestine of a diseased foal. It is not an organism that can survive for any length of time outside the body, hence infection by the mouth or via the navel after birth would seem to be most unlikely.

In the case of colon infection all of these arguments do not hold, and it is possible that occasionally colon may cause a rapidly fatal infection in the foal as in other animals.

A question which is indeed difficult to answer is—"How can the foal be infected for any length of time, either within or without the uterus, without serious and even extensive damage to the tissues taking place?" We can not suppose that intra-uterine infection occurs just a few days before the birth of the foal. In most cases it must have persisted for some time and yet largely as a dormant infection. Many foals are born 'weak' and die in forty-eight hours, which at post-mortem show evidence of acute infection only. While in the uterus the foal is no doubt receiving definite protection from the immunity possessed by the dam, which undoubtedly would have an inhibitory effect upon infection in the foal. The crisis of birth would certainly reduce any natural resistance to infection.

SOME INTERESTING MISCELLANEOUS OBSERVATIONS

1. That from external observation only the navel may appear to have healed without any infection, when a post-mortem examination may reveal a suppurative omphalo-phlebitis. Great care must be exercised in examining the navel to make sure that pus is not present just beneath the scab.

2. That even in the so-called mild cases of joint-ill a post-mortem examination usually reveals extensive and serious lesions, such as peritonitis or pleurisy and all the bacteriological evidence of a septicaemia. The designation joint-ill is certainly a misnomer and frequently most misleading.

3. In one case the infection passed via the umbilical arteries to the general circulation. The umbilical vein was free of infection.

4. That in most cases of joint-ill a post-mortem examination of the clinically normal joints will reveal the presence of definite inflammation of the synocial membrane. Few of the joints are found to be normal.

CONCLUSIONS

1. That *S. equirulis* and virulent colon bacilli are the organisms chiefly responsible for the early and highly fatal cases of joint-ill; causing between 60-70% of such cases.

2. That hemolytic streptococci are chiefly responsible for the less serious cases which develop after the second and third day of birth.

3. That most of the *S. equirulis* and colon infection is of pre-natal origin.

4. That *S. abortivo equinus* which was isolated frequently from cases of joint-ill twenty-five years ago has disappeared as a pathogen in this disease.

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ACKNOWLEDGMENTS

We desire to thank most sincerely those veterinarians who wholeheartedly cooperated with us in this investigation, also Dr. A. A. Kingscote who helped generously in the laboratory work.

A CASE OF SCRAPIE IN AN IMPORTED EWE

By FRANK W. SCHOFIELD, D.V.SC.

This is I believe the first case of "Scrapie" to be reported on this continent. The disease is endemic in several European countries, and the cause of considerable economic loss. In Great Britain the disease occurs chiefly in the border counties.

Although much research work has been carried on into the nature of this disease, the etiology remains unknown. Recent investigation would indicate that the disease is due to infection, and that the incubation period may vary from a few months to more than a year. Briefly the disease may be described as affecting the nervous system, and as characterized by restlessness, great itchiness of the skin, twitching of the muscles of the ears and eyelids, progressive emaciation and finally terminating—frequently after months of sickness—in death.

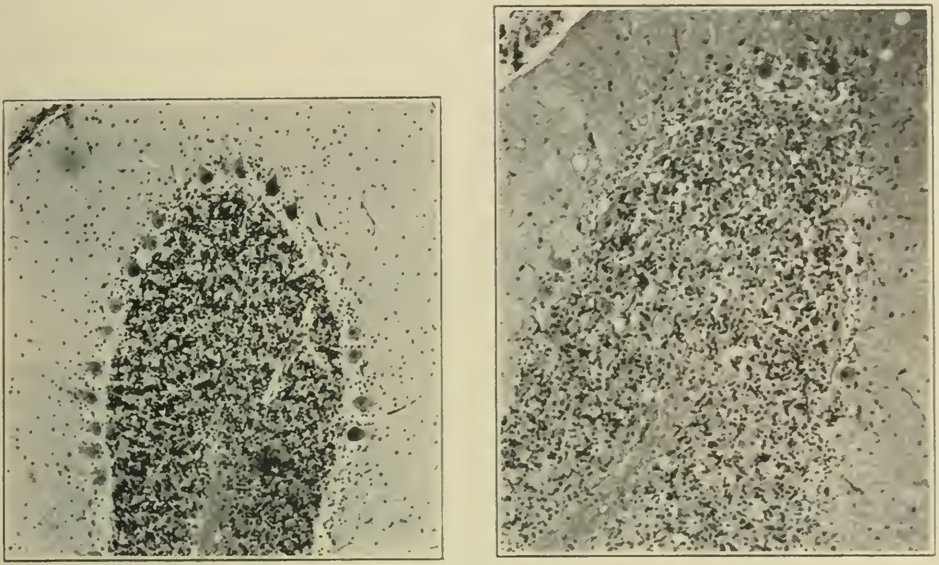
History of the Case. The subject was a three year old Suffolk ewe, which had been recently imported from Scotland. The animal was in good condition on arrival but after a few months began to show symptoms of a nervous disorder. The sheep was sent to the College with a tentative diagnosis of 'gid'.

Symptoms. Examination showed frequent twitching of different muscle groups such as the muscles of the ear and panniculus, causing movement of the skin and fleece. Spasmodic contractions of the skeletal muscles occurred which caused a jerking of the head or legs when the animal was in the recumbent position. Pruritus was also marked, the itching at times being very intense, so that the animal would rub heavily against the walls or bite intensely at the legs, flanks or other parts of the body. The wool had fallen out on the sides and quarters. The animal had become somewhat emaciated but the appetite remained fairly good. When the animal was caught and held securely, she would after a brief struggle, sink to the ground and have a convulsive seizure, which lasted for a few minutes. The condition became steadily worse and finally the animal had to be destroyed.

There was no increase in temperature. Both the red and white blood cells were within the normal range.

Post-mortem. No gross pathological change was noted.

Histopathology. Sections prepared from the abdominal and thoracic viscera showed no significant pathological changes. As far as could be determined most of the brain tissue was normal; the only exception being the cerebellum where there was evidence of degeneration of the Purkinje cells and numerous large and small vacuoles present which had the appearance of fat globules, but which failed to stain with Sudan 111. Sections from different levels of the spinal cord were made and examined with negative results. Groups of eosinophylic granules were present in some of the neurons of the inferior horn.



SECTION THROUGH CEREBELLUM OF SHEEP

NORMAL SHEEP

SCRAPIE SHEEP

Photo by V. R. Brown

Note the number and quality of the Purkinje cells.

Note the diminution in number of the Purkinje cells and numerous vacuoles.

FURTHER STUDIES IN BOVINE HEMOGLOBINURIA (RED WATER)

FRANK W. SCHOFIELD, D.V.SC.

For many years we have been studying this peculiar disease of cattle, yet up to the present time we are unable to state what is the exact nature of the disease. It is interesting to note that this disease has recently become the subject of investigation in certain parts of the United States. Farquharson and Smith[1] working in Colorado, and Madsen and Nielsen[2] working in Utah, while recognizing the existence of certain constant contributary factors, which we might add were noted in our earliest report[3], have as yet failed to discover the true nature of the hemolysis which is the essential feature of the disease.

It is interesting to note that these investigators find a constant relationship between the diet and the disease. In Utah the excessive feeding of sugar-beet pulp is definitely related to the occurrence of red water. In Ontario we find that the heavy feeding of kale, rape, turnip tops or turnips is almost always associated with the disease. In certain parts of the Province the disease has been reported as frequently occurring among cattle when turned out on grass in the spring. One might generalize and state, that the excessive feeding of any highly succulent food has a tendency to predispose to hemoglobinuria.

It is of interest to note that Madsen and Nielsen have discovered low blood phosphorus in most of their cases. A similar observation was made independently by us during the course of the investigation which was carried on last fall. This matter will be referred to again in greater detail.

This report is largely limited to the information gained and the experiments carried out during the fall and winter months. A general description and consideration of the disease will not be given as this has been fully done in previous reports. One fact must be mentioned, that the disease occurs in what might be designated as *acute* and *sub-acute* forms. The *sub-acute* form is the type of disease which usually occurs in this vicinity. There must have been hundreds of animals so affected during the fall months of last year. In this form, the disease is not serious, and usually lasts for a few days only. The urine is pale red in colour, the pulse is accelerated 70-90 beats, the heart-beat is pronounced and can readily be felt if the hand is placed on the thoracic wall over the cardiac region. In most cases there is neither temperature nor constitutional symptoms. The farmers do not consider the condition as serious, although there is a marked destruction of red blood cells which is injurious to the animal. In the *acute* cases, as well as the elimination of large quantities of hemaglobin in the urine, there are serious constitutional symptoms.

Blood Calcium and Phosphorus Determinations: As there was some evidence that the disease occurred more frequently in areas of mineral deficiency, and as the most serious and fatal cases occurred after parturition, it was thought advisable to have blood calcium and phosphorus determinations made. Such determinations were made on four herds which included a total of twenty affected animals. Calcium determinations were discontinued after the first two herds had been examined, as no variation from the normal was discovered. It was very different, however, in the case of the inorganic phosphorus, which showed both marked variation from the normal, and fluctuation in quantity from day to day.

This is well exemplified in the following table:

TABLE 1

Herd I

Cow No.	Mg. % Inorganic Phosphorus			Pulse	Temp.	% Hemoglobin	Urine
	Nov. 15th	18th	25th				
1.	3.56	4.17		102	103.6	40%	Dark red, H.P.
5.	1.12	4.78	4.30	110	103.0	40%	Dark red, H.P.
7.	2.84	4.20	4.65	78	102.6	60%	Dark red, H.P.
8.		5.50	4.80	78	102.4	40%	
4.	2.68		4.0	80	102.4	90%	Normal, H.N.

Herd II

Cow No.	Mg. % Inorganic Phosphorus	Pulse	Temp.	% Hemoglobin	Urine
	Nov 24th				
1.	2.64	96	102.2	30%	Dark red, H.P.
2.	2.52	80		95%	Normal
3.	2.54	60		80%	
4.	1.85			96%	Normal, H.N.

Herd III

Cow No.	Mg. % Inorganic Phosphorus		Pulse	Temp.	% Hemoglobin	Urine
	Nov. 22nd	Nov. 23rd				
1.	3.92	4.40	92	102	100	Nov. 22—Color normal, H.N. Nov. 23—Color pink, H.P.
2.	6.0	6.8	80	100	40	Urine normal, had been dark red
3.	3.8	4.0	90	101	65	Color red, H.P.
4.	4.6	4.9	66	102	100	Color red, H.P.
5.	5.2		100	100	40	Color red, H.P.
6.	5.3	5.2	86	86	70	
7.	4.4	4.7	84	84	35	Color red, H.P.

H.P.—Hemoglobin Positive.

H.N.—Hemoglobin Negative.

Note on Herd I: These animals had been feeding on kale and turnip tops for about three weeks. Due to the occurrence of Red Water, they had been removed to grass three days before we were called in to see the herd. It is impossible to say how long the disease had been present before cases were observed, but the condition of the cattle would indicate hemoglobinuria of about one week's duration. It is interesting to note the rise in phosphorus from the low levels of the first samples to the higher levels of the last.

Note on Herd II: The point of interest in this group is the low blood phosphorus for the whole group, while as far as is known only one animal was affected with hemoglobinuria; the others appeared to be normal. The cattle had been feeding on kale.

Note on Herd III: These cattle were in good condition and had been feeding on kale and rape for about three weeks. Cases of red water were noticed, and the milk flow began to decrease, so a liberal quantity of straw was added to the diet. It is interesting to note that in these cases the blood phosphorus is within the normal range. The significance of low blood phosphorus and its relationship to hemoglobinuria remains to be determined.

We have never encountered the extremely low levels of phosphorus recorded by Madsen and Nielsen. The majority of their cases were however of the acute post-parturient type, none of which are included in this series.

EXPERIMENTAL HEMOGLOBINURIA

In previous reports we have shown the difficulty of producing hemoglobinuria experimentally. Large quantities of kale, rape, or turnips can usually be fed to healthy cattle without any ill effects. This would indicate the existence of other factors which play an important part in producing the disease

Two cows and a heifer were used in the experiment. None were milking; all were in good condition. Rape was fed exclusively for a period of two weeks. Samples of blood, urine and feces were taken at frequent intervals for analysis.

The following table gives a brief summary of this experiment.

TABLE 2

Date	Cow No. 1			Cow No. 2			Cow No. 3			Remarks
	P mg. %	Urine pH	Feces pH	P mg. %	Urine pH	Feces pH	P mg. %	Urine pH	Feces pH	
Nov. 4:38	5.77	5.22	7.13	5.30	8.37		3.90		7.43	Feeding began
Nov. 5:38	5.65	6.02		5.77			3.58	8.05		
Nov. 8:38			7.37	6.85	7.35	7.08	3.74	8.2	7.52	
Nov. 9:38	5.57			6.00	7.60	7.42	4.17	6.68	7.16	
Nov. 12:38	4.37	5.82	6.9	4.96			3.96		6.78	Cow No. 1 Urine trace of albumin. Colour brown.
Nov. 15:38	3.28	6.79	7.0	3.38	6.93	7.12	2.51	7.10		
Nov. 17:38	8.60	6.29	7.51	6.10	8.28	6.91	4.42	7.02		Deep brown colour. Albumin present. Hemoglobin positive.
Nov. 18:38	7.47			5.13			5.43			
Nov. 21:38	5.25						3.28			Urine deep brown. Albumin positive. Hemoglobin positive.
Nov. 22:38	6.18						3.28			Urine pale colour. Hemoglobin absent.
Nov. 24:38	4.76						2.50			Feeding stopped.

The interesting feature of this experiment was the occurrence of mild and transient hemoglobinuria in Cow No. 1. Although the urine was not examined for the presence of hemoglobin on November 15th, it was most probably present, as the colour was typical of a mild case. The urine is almost colourless in cattle feeding heavily on rape or kale. The appearance of pigment in the urine coincided with the low phosphorus levels. A hemoglobin estimation of the blood on November 15th showed 50%. Cows No. 2 and No. 3 showed 100% and 95% respectively. Unfortunately no earlier hemoglobin estimations had been made.

The hydrogen ion concentrations in the urine and feces revealed nothing of significance.

One other point of interest is the constantly low level of blood phosphorus in cow No. 3.

In another experiment conducted during the month of March two cows were fed on a heavy turnip ration, a small quantity of hay being fed at noon only. Approximately 3,500 lbs. of turnips were consumed by the two cows in twenty-two days. Frequent blood estimations both for inorganic phosphorus and hemoglobin were made, but at no time was there any significant deviation from the normal.

Hemolysins. Both urine and blood serum from acute cases have been tested against suspensions of normal red blood cells, but in no case have hemolysins been demonstrated.

Fragility tests. The fragility of the red blood cells has been estimated in twelve typical cases with negative results.

CONCLUSIONS

1. That the blood inorganic phosphorus may be markedly reduced in animals suffering with hemoglobinuria.

2. That hemoglobinuria may occur, as in herd No. 3, with a normal level of blood phosphorus.

3. That the relationship, if any, of low blood phosphorus to the hemolysis which is the chief characteristic of the disease under consideration has not yet been demonstrated.

4. That hemoglobinuria may occasionally be produced experimentally by the prolonged heavy feeding of an exclusive diet of rape.

5. That in rape, turnip-tops, sugar-beet pulp and alfalfa, not only is the phosphorus content low, but there is also an imbalance between the calcium and phosphorus, which may tend to produce a phosphorus deficiency in animals fed exclusively on these foods*.

	Ca.	P.
*Sugar-beet pulp	0.68	0.07
Rape	0.34	0.07
Turnip-tops	0.39	0.30
Alfalfa (green)	0.40	0.06
Alfalfa (dried)	1.43	0.21

Figures from Morrison's "Feeds and Feeding".

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ACKNOWLEDGMENTS

We are indebted to I. Motzok, Department of Chemistry, O.A.C., for the analyses, and to G. C. Bishop and T. Kragness, senior students, for faithfully taking the numerous samples of blood and urine.

WINTER OR STABLE BLACKLEG

During the past winter four outbreaks of blackleg were reported among cattle which were being stable fed. Mention is made of these cases for the following reasons:—

First. The occurrence of blackleg among stabled animals is not common, hence the tendency on the part of the veterinary surgeon to fail to recognize the true nature of the disease until several cases have occurred. In two instances such delayed diagnosis resulted in serious loss, which naturally did not enhance the reputation of the practitioners. It is possible that too much emphasis has been placed upon the fact that the disease is essentially a pasture disease.

Second. The statement that '*Cl. septique* is the cause of clinical black quarter in housed cattle'—quoted from Gaiger and Davies, Veterinary Pathology and Bacteriology page 253—is not correct for the disease as it occurs on this continent. In only one of the four outbreaks was *Cl. septique* isolated. However, the isolation of *Cl. septique* does indicate the necessity for a careful bacteriological examination when there is any doubt as to the nature of the infecting organism. There is much evidence to support the view that little or no protection is conferred against *Cl. septique* infection by blackleg vaccination.

REPORT OF THE HISTOPATHOLOGY IN STIFF LAMB DISEASE

Muscle. The affected fibres first show a loss of striation, the muscle substance being homogeneous or hyaline in appearance. This is followed by a fracturing of the fibres. In most cases the fragments swell and undergo a granular distintegration, lysis and phagocytosis, so that ultimately the sarcolemma sheath alone remains. The fragments may however contract, swell, and become peculiarly infiltrated with lime salts. The calcium is deposited in lines throughout the degenerate fragment, producing longtitudinal striation. Cell infiltration is not excessive, but both polymorphonuclear cells and round cells are present. Haemorrhage is not seen.

In the final stage the affected tissues show marked cellularity: this is due to a proliferation of the fibroblasts, and a multiplication of the nuclei in the sarcolemma, several nuclei may be seen in a miniature muscle sheath. There is moderate cell infiltration and numerous portions of damaged muscle remain in the cellular mass.

Liver. Small clusters of ten or twenty polymorphs are scattered throughout the liver tissue; an average of about one cluster in each lobule. The parenchyma shows slight damage only.

Thyroid gland. The gland is enlarged and sections show marked hyperplasia of the secretory epithelium.

Lesion in the Muscle—Stiff Lamb Disease

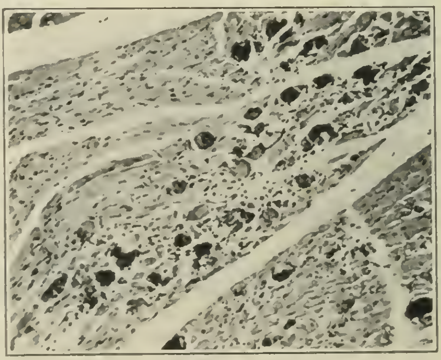


Photo by V. R. Brown

Note the degeneration and fracture of the fibres with calcareous infiltration of the fragments.

A VIRUS DISEASE OF CANARIES

Frank W. Schofield, D.V.Sc., and N. Labzoffsky, B.S.A.

During the past winter fatal outbreaks of disease among canaries have been reported from two aviaries. One outbreak was very serious resulting in the loss of over one hundred birds, some of which were quite valuable. In both instances the mortality was high—few birds recovering. A complete post mortem examination was made on thirty-five birds, and twenty-five were examined bacteriologically. Mention might be made of a very serious outbreak among valuable birds in a large aviary which was investigated in 1922. At that time the disease was considered to be due to a virus. The evidence was incomplete, one canary alone becoming infected with a filtrate.

Symptoms of the Disease

The first symptom noticed is that the bird is less lively than usual, sitting quietly on the perch, with the feathers slightly ruffled. When disturbed it will hop around as if quite well. In a day or two difficult breathing is noticed; the bird may be huddled in the bottom of the cage, with mouth wide open, and gasping for breath. Most cases terminate fatally. Diarrhoea may be present. From the first the appetite is capricious.

Post Mortem Findings

The lesions found at post mortem are very constant.

Skin: This usually shows numerous small 'pox like' lesions, which vary in size from a pin head to a lentil. These are always more numerous on the head and neck and have a tendency to follow the feather follicles over the surface of the body. When gently rubbed the skin is easily removed and reveals the presence of a serous exudate in the subcutis, the tiny lesions being due to necrosis of the skin and fibrinous exudate; neither lymph nor pus is present. The skin lesions are the most constant and characteristic feature of the disease.

Pharynx: In a few cases a tiny firm yellow exudate was present in the pharynx, about the size of a bird seed. This was easily detached from the wall of the pharynx; in fact, it is usually loose in the posterior pharynx. The exudate must have been rolled into the spherical form by the movements of the tongue and cheek.

Spleen: This organ is usually greatly enlarged, pale yellow in colour, and having a finely granular appearance. It may be large and dark red. In about one-third of the cases there is no splenic enlargement. The appearance of the spleen is very similar to that described in 'bird fever' (infectious necrosis).

Liver: Usually pale, and occasionally containing a few tiny pale yellow foci of necrosis.

Intestine: The duodenum is frequently acutely inflamed, the ingesta being slightly haemorrhagic.

Kidneys: These organs were usually pale in colour.

Lungs and Pleura: On opening the thorax, a yellow sero-fibrinous exudate was usually observed. In some cases it spreads posteriorly over the liver and

VIRUS DISEASE OF THE CANARY

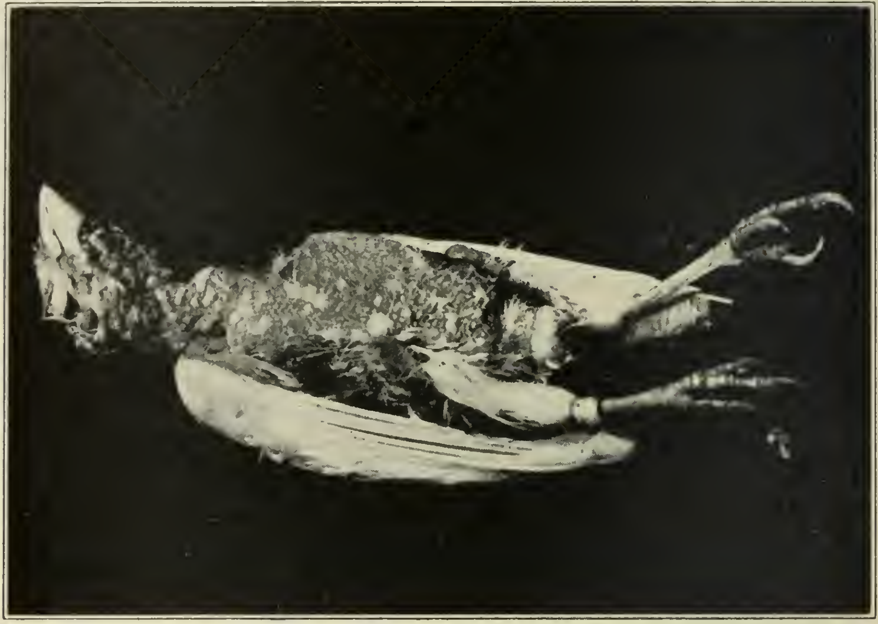


Illustration Showing Skin Lesions

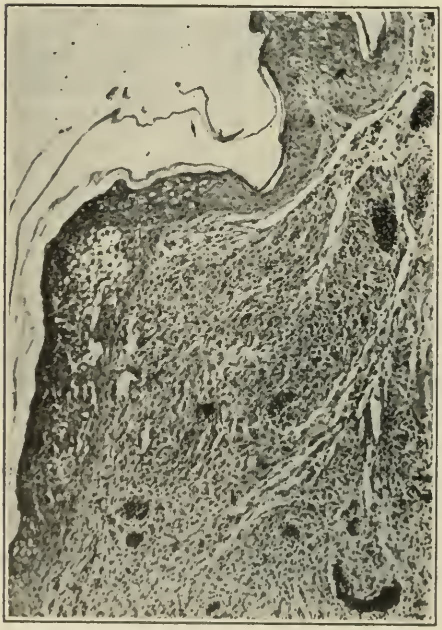
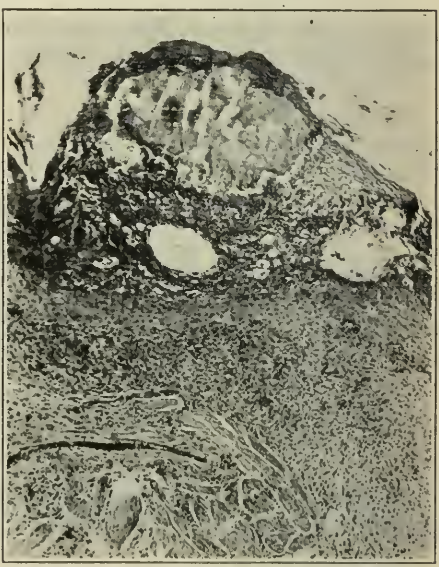


Photo illustrating dengeneration and proliferation of the epidermis. The swollen cells contain inclusion bodies.



A more advanced lesion of the skin, showing sero-fibrinous exudate and necrosis. Inclusion bodies are readily seen.

anteriorly over the heart and bifurcation of the trachea. Pneumonia involving one or both lobes, or just a portion of a lobe, was usually present. The affected area is very firm to the touch, being rich in fibrin.

Granular lesions on the eyelid and at the commissures of the mouth were occasionally seen.

BACTERIOLOGICAL FINDINGS

Both aerobic and anaerobic cultures were made on blood agar from about twenty-five birds. The results may be briefly stated as—no single organism was found to be constantly related to the lesions. A variety of organisms were isolated from the pneumonic lung. A diphtheroid and a small Gram-negative rod similar in morphology to the Pasteurella were the two most frequently encountered. The *skin lesions* were either negative or gave a heavy growth of a staphylococcus or diphtheroid. The *spleen* was uniformly negative, likewise the *liver*. Cultures from the *intestine* were mixed and unsatisfactory. These results forced us to the conclusion that a virus was in all probability the primary cause of the infection.

ISOLATION OF A VIRUS

Employing nine day old chick embryos and tissue filtrates from the dead birds, one of us—the junior author—was able to isolate a virus which killed the embryo in from 36 to 48 hours. The chick is hemorrhagic and the membrane oedematous, slightly hemorrhagic, and shows scattered areas which are white and opaque. Difficulty was experienced in isolating the virus from the skin, as it was apparently held back by the filter. The virus was readily obtained when blood was withdrawn from the heart of a sick bird, filtered and chick embryo inoculated. Virus was also isolated from the lung and spleen. The virus has been kept frozen for as long as three months.

EXPERIMENTAL VIRUS INFECTION

In three instances tissue filtrates when injected subcutaneously into susceptible canaries, resulted in the disease being reproduced in its essential features. In five birds infection did not follow inoculation. In one case the skin lesions covered the whole body, and the spleen was greatly enlarged and congested. In another, the pharynx and palate were covered with minute cheesy nodules; the spleen was enlarged and mottled, and the muscle at the site of injection, necrotic and infiltrated with inflammatory exudate.

In other experiments, the lung tissue, the spleen, and blood, which were found to be bacteriologically sterile, were injected into canaries, and the disease reproduced. In several instances, tissue filtrates from these birds when inoculated into chick-embryo caused death of the chick in from 24 to 36 hours.

Incubation Period: This is not constant and apparently varies from five to twenty-one days.

Inclusion Bodies: These are present in great abundance in the degenerate epithelial cells of the skin. These bodies are quite large and spherical, or slightly elongated, and are usually about the same size as the nucleus of the red blood cell. Similar bodies are present in the epithelial cells of the kidney. They closely resemble Guarnieri bodies. With suitable illumination, numerous granules may be seen within the inclusion bodies. These are most likely the Prowazek elementary bodies, common to pox disease.

Infection in Experimental Animals: Mice, guinea pigs and pigeons, all appear to be resistant to infection. In the case of mice and guinea pigs, large quantities of infected tissue were injected, both subcutaneously and intraperitoneally, with negative results, filtrates from such tissue killing chick-embryo.

NATURE OF THE DISEASE

We hesitate to definitely designate the disease until more information on the diseases of canaries has been obtained. It certainly belongs to the group of 'pox diseases', but we do not believe that it is identical with the virus disease of poultry known as 'fowl pox' or 'contagious epithelioma'. The lesions in the spleen correspond very closely with those seen in infectious necrosis of the liver, but the causative organism (*Pasteurella pseudo tuberculosis*) is not present: instead a virus has been demonstrated.

Since completing this work our attention has been called to a pox disease of canaries described by Kikuth and Gollub and known as "Kikuth Disease". Unfortunately we have not as yet been able to study their work, so can make no statement as to the relationship of these diseases.

ACKNOWLEDGMENT

We wish to record our appreciation of the valuable help given by G. L. Bannister, a senior student, in the prosecution of this work.

DISEASE OF SWINE

By T. L. JONES, B.V.SC., M.SC.

The commonest diseases encountered in swine brought to the College for examination are, anaemia, Pasteurella infection and scours of the newborn.

Anaemia is preventable by feeding 0.3 mgs. (as much as will lie on a dime) of reduced iron on the tongue of each pig seven days after birth. A second dose may be given at the end of the second week. Fresh sods sprinkled with reduced iron, or a solution of iron sulphate, replaced every week and placed out of reach of the sow, are also helpful. There is no danger of anaemia developing after the pigs begin eating grain, but if they are anaemic before this they usually do not recover to normal health.

Pasteurella infection or Hemorrhagic Septicaemia is commonly spoken of as Shipping Fever because of its high incidence after animals have been subjected to the hazards of shipping. Apart from this the disease is usually the outcome of improper housing and errors in feeding.

The pig brooder house which has been used with success in Alberta should reduce losses from this disease in winter litters. The most popular plan in use at present is a hexagonal building, partitioned to accommodate six brood sows.

In the centre is a chick brooder stove which has been reported to operate on a ton of low grade coal for the entire winter. The little pigs lie near the stove in a space to which the sow cannot gain access.

Losses among winter litters are so great that the initial cost of a building which will reduce the death rate will soon be repaid. This special care, however, must not stop at the end of the nursing period. The fact is that outbreaks of Pasteurella infection occur most frequently shortly after weaning. To combat this it is essential to provide warm quarters with adequate light and ventilation, as well as proper food. Errors in feeding are common at this critical period. Pigs should not be weaned until they are at least six weeks old, and it is wise to feed them from a creep before this. Feeding troubles at this stage are usually caused from the fact that the grain is not ground finely enough. Often the oat hulls are not removed. These irritate the mucous membrane of the stomach which is used to little else but milk. For the same reason the feeding of a slop with milk is less likely to cause trouble than using a dry feeder.

Scours of the newborn is usually too common during the late winter and spring months. There is often a history of the entire litter dying within the first week after birth. In such cases it seems apparent that little or no immunity has been conferred to the offspring. This is no doubt due to the fact that the sow, following some months without sunshine and green food, becomes depleted in vitamins which are necessary to the production of a normal healthy litter.

It is essential, therefore, to provide the sow with feeds rich in vitamins during the gestation period. It may also be wise to supplement the ration by feeding cod liver oil for two months before farrowing—particularly when litters are expected in the late winter and spring.

Inadequate housing and improper feeding of swine are serious handicaps to an industry which should be one of the most profitable phases of livestock production. The diseases which are responsible for the greatest economic loss to the swine husbandman are largely preventable by over-coming these deficiencies.

FOOD POISONING IN FOXES AND MINK

By LIONEL STEVENSON, PROVINCIAL ZOOLOGIST

The loss to the fur-bearing animal industry caused by the toxic properties of food is the largest single loss experienced by many fur animal ranchers in Ontario. Sixty-two per cent. of the dead animals of the fur-bearing class that reach the postmortem room at the Ontario Veterinary College for the determination of the cause of death reveal, on examination, that tainted food has been the cause of the loss. One hundred carcasses of Silver Fox and Mink were examined for cause of death during the period June 1st, 1938, to March 31st, 1939, with the following results:

	Fox	Mink
Food Poisoning	11	51
Parasitism	3	1
Pneumonia	4	12
Septic Arthritis	2	0
Peritonitis	1	1
Coccidiosis	0	4
Nutritional Anemia	0	4
Uraemia	0	5
Pregnancy disease	0	1

Food Poisoning may be considered in the following sections:

(1) Toxins devoleped in food due to bacteria.

(2) Ptomaines or degradation products of protein decomposition.

(3) Botulinus exo-toxins resulting from the action of Clostridium Botulinum.

(4) Endogenous poisonous foods.

(5) Exogenous poisonous foods.

(6) Allergy.

1. *Toxins developed in food due to bacteria:*—

(a) The Salmonella group of bacteria in which there are nineteen species may produce toxins capable of causing digestive upset or even death in meat-eating, fur-bearing animals. Various animal diseases are caused by this group of bacteria; notably, pyemic and septicemic conditions in domestic animals generally. The flesh of domestic animals that have been ill at the time of slaughter or may have died due to salmonella infection is sometimes fed to fur-bearing animals with dire results. The two members of the Salmonella group that are most frequently found in food poisoning outbreaks among foxes and mink are Salmonella enteritidis and Salmonella aertrycke. Statistical studies on food poisoning outbreaks, due to Salmonella, show a marked seasonal incidence. During the warmer months of the year, there is greater opportunity for bacteria to grow; hence, during such periods of optimum bacterial growth, more toxin is produced. Experiments in foods, kept at different temperatures, show that a number of bacteria, insufficient to produce a dangerous amount of toxin at some temperatures, might multiply at temperatures more favourable to growth and cause a dangerous degree of toxin production. Hence, no danger with food one day, but plenty of grief the next, if temperature changes were more favourable to bacterial growth. It has been found that Salmonella growth is usually most rapid on the moist surface of meat and slower in the depths of the meat. It has been found also that, in closed containers without evaporation, growth progresses rapidly, if the temperature is favourable to bacterial growth. Evaporation and decreased humidity retard growth somewhat, although Salmonella have been found growing on the surface of meat slaughtered forty hours previously and hanging in a dry, cool place.

Salmonella have been found in the flesh of condemned animals, and also in the flesh of apparently normal animals. When we consider that members of the Salmonella group cause serious diseases in the animals from which the fur farmer draws the meat supplies for his foxes and mink, it is easy to realize why trouble may follow the use of the flesh of horses or cattle that are infected with any one of a number of the common ailments to which these animals are subject and particularly those that create a pyemic or septicemic condition. Danger is not confined to the use of flesh foods made dangerous by disease during the life of the animal, but meats may become contaminated by carriers of disease-producing organisms; such as, rats and mice. Rats and mice, commonly infected with bacteria of the Salmonella group, may survive initial attacks and become carrier and spreaders through the medium of meats which they contaminate by their presence on the ranch.

(b) Members of the two groups of bacteria, the streptococci and the staphylococci, are known to secrete toxic agents, if given an opportunity to grow on meat, vegetable, or cereal foods. The toxins, produced by some members of the two groups, streptococci and staphylococci, will cause, in animals taking them, the usual chain of symptoms characteristic of food poisoning. The post-mortem picture is one of acute gastroenteritis. Bacteria, belonging to these groups, are widespread in nature and the opportunities for food contamination are usually great around places where animal foods are handled. Raw milk from mastitis-infected cows used in mixing fox or mink food is a likely source of infection. Udder tissue from mastitis-infected cows, if used as meat, is also likely to prove dangerous to the fox or the mink.

2. *Ptomaines or degradation products of protein decomposition:—*

(a) The term "Ptomaine Poisoning" has been used for the severe gastrointestinal upset in mink or fox of obscure origin. The symptoms include: nausea, vomiting, diarrhoea, general prostration, with recovery in three or four days in most instances.

Ptomaines result from the action of bacteria on proteins and are degradation products of protein decomposition found in the later stages of putrefaction. Ptomaine formation from proteins is brought about by the hydrolysis of the protein to the amino acid stage. The amino acids, in turn, are broken down in one of two ways: an animo group would be eliminated by deaminization or a carboxyl group would be removed by decarboxylation. Deaminization of amino acids yields different amines or ptomaines, some of which are considered to be poisonous. Many amines; such as, putrescine, cadaverine, and sepsine, are very slightly toxic; others have no toxic effect as seen in putrefied cheese and eggs; some few are really dangerous. Hence, all degrees of reaction are to be seen following the ingestion of putrefied foods. Food materials, containing a high per centage of protein; such as, meats or meat products, must reach a state of putrefaction before ptomaines are formed. With putrefaction, an odour and uninviting appearance generally develop. These are protective factors for the elite, but unfortunately foxes and mink are attracted by, and eat, meats in an advanced state of putrefaction. Such 'choice morsels' may contain amines that are toxic to some degree. In distinguishing between amines (ptomaines) and bacterial toxins, it should be kept in mind that amines are decomposition products, resulting from the breaking up of proteins while bacterial toxins are toxins resulting from bacterial growth in protein substance. In general, the symptoms exhibited in the so-called cases of ptomaine poisoning are very inconclusive. In some severe cases, they resemble those caused by toxins of the members of the Salmonella group of bacteria.

3. *Botulinus exotoxins resulting from the action of Clostridium Botulinum:—*

(a) Botulism is an acute toxemia caused by the toxin of a strictly anaerobic, spore-bearing organism, Clostridium botulinum. This organism is widely distributed in nature. It is associated with the excreta of warm-blooded animals; it is found in the feces of two out of ten normal persons; it may be on any vegetable or forage crop grown on soil fertilized with excreta of warm-blooded animals; it may be on vegetables and forage crops when they are gathered. Fox and Mink foods may be contaminated in handling. Two possible sources of botulinus trouble are tripe and mouldy alfalfa. These are not alone in causing trouble. The toxin formed by Clostridium botulinum is a true exotoxin. The toxin is excreted from the cell into the food where it remains unharmed for long periods. It is elaborated in the cell in intimate association with the bacterial globulin. The toxin appears in the medium only after cell disintegration.

The toxin of Clostridium botulinum is quickly destroyed by heat; 80° C. for thirty minutes is sufficient. The spores are killed by ten minutes of boiling, or by the application of a 10 per cent. hydrochloric acid solution. The spores are not killed by prolonged exposure to cold. The toxin is not reduced in potency by cold storage, indicating that food preserved by cold storage should be used immediately after thawing.

The presence of certain other micro-organisms along with Clostridium botulinum sometimes favours toxin formation. Fur farmers are advised to reject any food material showing any evidence of the presence of mould.

DIFFERENCES BETWEEN BOTULISM AND FOOD INFECTIONS

	Botulism	*Food Infections*
Cause	Botulinus Toxin	Bacilli of the paratyphoid-enteritidis group
Fever	Not characteristic; temp. usually subnormal.	Characteristic; acute
Occurring	Mainly in winter	Mainly in summer
Associated with	Preserved foods	Fresh foods or freshly contaminated foods . . . usually meat or milk
Condition of Intestine	Constipation	Diarrhoea; offensive
Visual disturbances	Double vision; ptosis of lids	Absent
Onset	Usually gradual	Sudden
Abdominal Pain	Absent	Present
Incubation Period	Variable; usually from 12 hours to several days	Short; usually from six to twelve hours
Throat	Swallowing difficult	Normal
Treatment	Antitoxin	Systemic
Mortality	From 60% to 70%	From 1%-2%

4. *Endogenous poisonous foods*

(a) In endogenous poisonous foods, the poison is an inherent quality of the food as muscarine in mushrooms. Some mollusks and fish are poisonous at certain phases of their sexual life. Certain fish are highly poisonous even when fresh, due probably to leukoamines and basic alkaloidal substances elaborated by cell metabolism.

5. *Exogenous poisonous foods*

(a) Poisonous compounds; such as, metals, arsenic, tin, lead, zinc, copper, and antimony.

(b) Animal parasites; such as, trichinae infected meat.

(c) Bacteria and fungi, mouldy cereals, ropy bread.

6. *Allergy or Food sensitiveness*

Some foxes and mink are highly allergic; that is, hypersensitive to certain food substances and react violently when such foods are taken. The various mixtures of food substances prepared for feeding these animals can not be entirely satisfactory for all animals in the ranch. There will be individuals that are allergic to some ingredient in compounded feeds. Some losses must be expected due to allergy among these highly nervous animals.

CONTAMINATION OF FOOD

Wholesome food can become contaminated with pathogenic bacteria by coming in contact with receptacles for holding prepared food, feeding equipment, meat and bone grinders, and the storing of meat in contaminated refrigerators. The holding of food in metal containers without refrigeration has its dangers, freezing and thawing of improperly held or stored food is likely to lead to trouble. Rats and mice may carry dangerous organisms to stored or held food with dire results.

SYMPTOMS OF FOOD POISONING

The virulence of the toxin, or other poisonous principles present in the food, will cause considerable variation in the symptoms of many compared cases. Animals perfectly well at feeding time may be found curled up in the nest dead a few hours later. Severe cases may show abdominal pain, prostration, frothing at the mouth, posterior paralysis, convulsions, and coma. In milder cases, there is a desire for water, the eating of unnatural substances, dry, harsh fur, and sunken eyes. The postmortem pictures vary considerably with the agent responsible for death and its potency. Gastroenteritis, an enlarged spleen, a hyperemic liver, and congested lungs are the usual prominent changes.

SEPTIC ARTHRITIS OF YOUNG FOXES

By A. F. BAIN, B.V.SC.

During the past summer (1938) we were approached by the manager of a chain of fox ranches for assistance in controlling a disease effecting the young, nursing foxes.

A number of the young foxes, both living and dead, were brought in to the laboratory. They originated on several different ranches and were all from different litters.

The sick foxes showed high temperatures and swelling of various joints: shoulder, hip, hock, etc. In some cases the swollen joints had opened on the surface and were exuding blood-stained pus.

Postmortem Findings. Autopsy revealed: in addition to the abscesses affecting the joints, a septicemia shown by dark red musculature and petechial haemorrhages on the serous membranes.

Cultures from the pus in the affected joints, and in some cases from the blood and the internal organs as well, resulted in the isolation of a Beta-hemolytic streptococcus. The organism belonged in Group C of Lancefield's classification, but was not Streptococcus equi because it fermented Sorbitol. The organ ism was isolated from every case. No cases were reported from any ranch other than those belonging to the chain, but on these ranches many cases occurred and at least one on each ranch of the chain.

The only feature which was found to be common to the ranches, which were well separated geographically, was that the food was prepared in one place. Horse-meat formed the basis of the ration. Many horses were purchased and slaughtered at one time and from the meat, either fresh or preserved by refrigeration, the ration was prepared and shipped to the various ranches of the chain.

Conclusion. It is considered that the infection, therefore, originated from a horse either carrying, or suffering from an infection caused by, the responsible organism.

REPORT OF THE CLINICAL DEPARTMENT

R. A. McIntosh, M.D.V., B.V.Sc.

This department is concerned with the practical application of veterinary medicine and surgery. This is done chiefly for the purpose of instructing students in therapeutic and surgical procedure. It has, however, other values as it is a form of extension service which enables treatment of different cases which local practitioners may find inconvenient to handle. It also has a value in the fact that many animals are restored to health, usefulness, and increased value as a result of the service. An examination of the clinic records of the past decade reveals a steady increase in the numbers of the cases submitted to the clinic. Clinical material comes from many parts of the Province, being brought in at the suggestion of veterinarians and others. In addition to those brought in from a distance, the Agricultural College livestock and other animals in the immediate vicinity of Guelph are presented frequently for clinical observation and treatment.

The nature of these cases is quite varied and all species of domesticated animals are submitted. This is revealed in the following data taken from the records of the Clinical Department.

In the past year, upwards of 225 horses were submitted to the Clinic. Surgical cases were preponderant but there were also a number of medical cases, and, in a few instances, cases of an infectious nature, representing ailments affecting a number of animals in the same quarters. There were 150 cattle submitted and in this species sterility cases and breeding abnormalities were most numerous. There was also a number of herd conditions; such as: Abortion, Mammitis, Sterility, Mange, and Hemorrhagic Septicemia under surveillance. Representative cases from affected herds of Calf Scours, Calf Pneumonia, Johne's Disease, Actinomycosis, and Tuberculosis were brought in for demonstration purposes.

Upwards of 100 swine were submitted for examination. With reference to the swine clinics, there was a considerable number of surgical cases; such as hernias, cryptorchidism, and other congenital aberrations. These provide interesting and useful clinics because surgical treatment of these abnormalities is attended with good results in most instances and can be clearly demonstrated. Many of the swine cases, however, are disease conditions representative of some affection of a litter or a herd of pigs and because the history of these outbreaks, the clinical aspect of the case, the postmortem examination (in some instances), and the subsequent bacteriological findings can be followed through, they make exceptionally useful clinics. The diseases most commonly observed are Anemia of suckling pigs, Gastro-enteritis, Pneumonia affections, Parasitism, and Nutritional disturbances. Such infections ts those responsible for Hemorrhagic Septicemia, Swine Erysipelas, Necrotic Enteritis, and general Sepsis are isolated frequently.

The number of pigs in the herds from which representative cases were brought in for examination was 418. In a number of instances from subsequent reports received from the owners, a real service was rendered as the losses were halted and the remainder of the pigs improved and recovered from the condition.

The sheep clinics are not as numerous as those of swine, but here again certain cases are brought in as examples of flock conditions and include such diseases as Parasitism, Pregnancy Disease, Hemorrhagic Septicemia, Lambing troubles, and Nutritional imbalances.

The small animal clinic is well patronized, 150 dogs, cats, and other pets being submitted for examination and treatment. Many of the cases are,surgical in character, but there is a coniderable number of patients suffering from the various ailments peculiar to the canine and feline species. Mange, Distemper, Chorea, Gastritis, Eczema, fractures and dietary errors being illustrative of the most common disease conditions encountered.

The greater part of the foregoing activities of this Department are accomplished during the instructional period of the College. In the interim, the work is confined to occasional examinations of exceptional cases, extension service in the form of investigations of outbreaks of disease, and assistance to practitioners in a consultation capacity.

To illustrate the character of the Clinic, the following Reports of interesting cases are submitted:—

TUBERCULOSIS IN A HORSE

The Annual Report of the Veterinary College of 1936 contained a report of this nature and mention was made of the rare occurrence of Tuberculosis in horses, but here again in 1938 another marked case was presented at the Clinic.

The animal in question had been under the observation of Dr. Melhuish of Toronto, and he felt that the condition was caused by a tubercular infection, but desired the corroboration of the College. Accordingly, the patient was brought to the Clinic, and when examined was found to be greatly emaciated, debilitated, and weak. He was a young, Clyde gelding of evident good breed characteristics. His breathing was much too fast, somwhat difficult, and loud. The difficulty in breathing was to a considerable extent due to pressure on the larynx and trachea by enormously enlarged and tumified lymph glands in the region of both the throat and the mediastinum. Purulent blood-streaked discharges emanated from both nostrils. Coughing occurred on occasions. The temperature was 101° F. The pulse rate was about 70-85 and weak. The appetite was poor.

A subcutaneous tuberculin test, using bovine tuberculin, gave a positive reaction. Subsequently, the patient was humanely destroyed and the carcass submitted to a postmortem examination. In this regard, it was found that the laryngeal region was greatly tumified, due chiefly to the enormous enlargement of all of the lymph glands in that region.

Comparing this case with that of 1936, the most striking difference was in the lymphatic involvement. The lymphatic glands in the former case were enlarged also, but in this case much more greatly tumified. The lungs revealed a productive, miliary tuberculosis, the heart was enlarged but flabby, the liver fibrosed and the mesenteric lymph glands were involved also.

Tissue speciments and material were taken from the carcass and the diagnosis of tuberculosis (bovine type) was verified by laboratory technique and experimental animal inoculation.

CLINICAL TUBERCULOSIS IN A COW

The subject of this Clinic was a grade, Ayrshire cow, three and one-half years old. She had been on pasture all summer and on into the late fall. The owner stated she had a chronic cough while on the grass, but after stabling, her coughing became more pronounced. He noticed also that she seemed to have difficulty swallowing, particularly chopped grain which almost choked her. Because of the difficulty she was having to eat, the owner submitted the case to the Clinic for examination.

When examined, the patient appeared unthrifty, quite emaciated, and gaunt Her head was held slightly extended and breathing was difficult, loud, and associated with paroxysms of coughing. In its external appearance, the laryngeal region was thickened and tumified. Deep palpation revealed an enlargement of the retro-pharyngeal lymph gland. Other superficial lymph glands could be felt which were indurated.

Because of the history of chronicity in the case, her unthrifty, general appearance, and the induration of palpable lymph glands, it was suggested to the owner that it would be advisable to permit the testing of the patient for tuberculosis. This was agreed to and an intradermal injection made in the caudal fold. A very positive reaction was apparent in forty-eight hours which persisted for some days afterwards. The centre of the reaction swelling showed a slight necrosis of the epidermal layer of tissue.

Later on the cow was destroyed and a postmortem examination revealed extensive tubercular lesions in the lungs and all of the lymph glands associated with the respiratory tract. Because some of the body lymph glands were involved, the case was generalized undoubtedly. This diagnosis was verified also by laboratory methods.

STERILITY IN COWS

Many cases of sterility are submitted to the Clinic each year for diagnosis and treatment. These cases vary considerably in many instances. Some are due to pathological changes and diseased conditions of the different organs constituting the genital tract, while others are due obviously to nutritional deficiencies which apparently affect the reproductive hormones which regulate the oestral cycle.

As an example of the former, the following case is reported: The subject was a Holstein cow, four years old, which had given birth to a calf in October, 1938. She had appeared in oestrus regularly until about two months previous to this examination, but since that time had not manifested heat. The attendant mentioned having observed a purulent discharge from the external genitals on occasions. He mentioned also that her calf was still-born but the afterbirth had been expelled naturally.

In the examination, it was found that the right ovary contained an imbedded corpus luteum and that the uterus contained a quantity of purulent exudate. The diagnosis was a pyometra and retention of the corpus luteum. The retention and imbedding of a corpus luteum is an occurrence which is quite often observed in pyometra and usually results in a failure to manifest oestrum.

The handling of this case was accomplished by passing a catheter through the cervix draining off the pus and, subsequently, the irrigating of the uterus. Following the irrigation, two fluid ounces of a 5% Argyrol solution was injected into the uterus. The imbedded corpus luteum was dislodged from the ovary and the attendant advised to watch her closely for the next few days to observe if oestrum occurred.

On a later occasion, this cow was returned, and it was learned that she came in heat and on examination, it was found that the uterus had contracted down to its normal non-gravid state. No evidence of the purulence could be determined. The owner was advised to breed her at the next occurrence of oestrum. This was done, and he reported later that the cow had apparently conceived.

It should be noted that cases of pyometra cannot as a rule be as quickly or easily corrected as was apparent in this case. Furthermore, the return of oestrum probably had much to do with her recovery for the activity, congestion, and discharge of material from the uterus at this time is an important feature in the correction of such cases. Long-standing cases of pyometra are usually unfavourable because the mucous membrane has become damaged to such an extent to inhibit embryonic implantation and foetal development.

As an example of sterility due to ovarian dysfunction which probably had its origin in a nutritional deficiency an Ayrshire cow aged six years, rather unthrifty in appearance, but apparently milking well was submitted for examination. In this instance, the cow had freshened in the late fall but had never appeared in oestrum up to four months after calving. The owner mentioned that she was an exceptionally good milker and also that she had a depraved appetite for he had noticed her eating at foreign material.

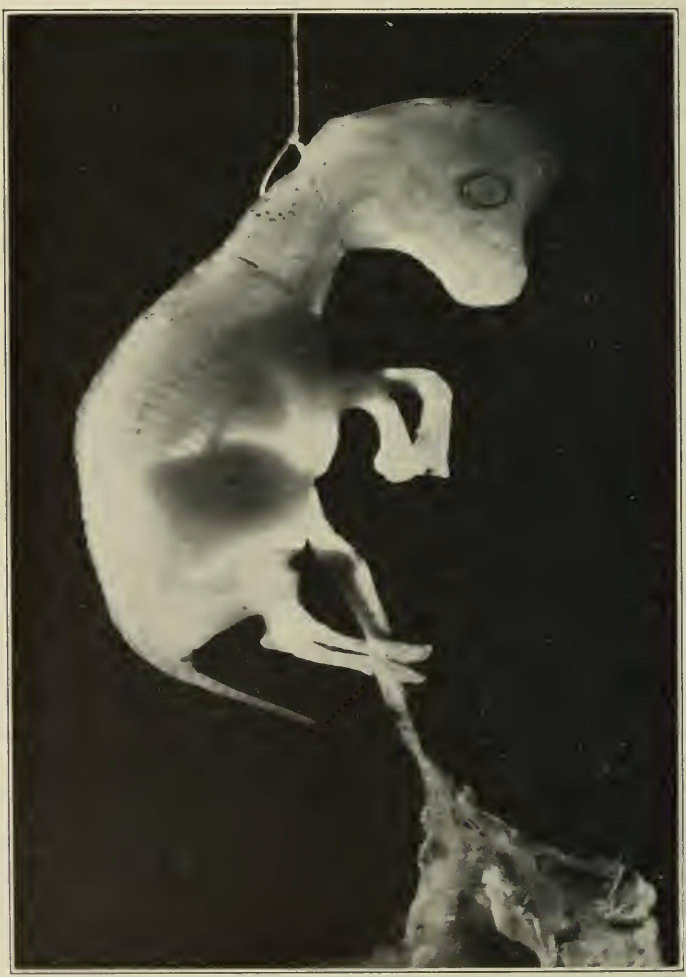
An examination of the genital organs revealed a well-formed corpus luteum on the right ovary. As she had never manifested heat since freshening, this was probably the corpus luteum of pregnancy which had persisted and prevented the recurrence of oestrum. Except for a slight atonicity of the uterus, no other abnormality could be determined and a diagnosis of a persistent corpus luteum of pregnancy resulting from nutritional imbalance was made.

In the treatment of the case, the corpus luteum was dislodged from the ovary by rectal manipulation and the owner advised regarding the manner in which the cow should be fed.

ARTIFICIAL ABORTION IN AN IMMATURE HEIFER

The subject upon which this procedure was accomplished was a pure-bred Shorthorn heifer just eight months old. She was kept in a large, roomy stall along with six or seven other heifers about the same age. They were allowed exercise in a pen adjoining one in which a Hereford bull was kept. Inadvertently, a gate between the two pens was left open and the Hereford bull bred the heifer. This occurred on June the nineteenth, 1938. Fifty days later, an examination of the heifer revealed that she had conceived.

As she was too young to commence breeding and also because the Hereford cross was undesirable, the owner requested that an abortion be accomplished. On August the 16th, the heifer was examined and the corpus luteum of pregnancy which was on the right ovary was dislodged. Three days later the fetus was expelled. Previous to the expulsion of the fetus, the heifer acted as if she were in oestrum. The fetus was just exactly two months old, and it was interesting to note that calcification of the long bones was just commencing to appear. No undersirable after-effects occurred as a result of the procedure and no other manipulation was required to accomplish the act.



Artficially Aborted Fetus—Exactly Two Months Old

STIFF LAMB DISEASE

Both last spring and this spring, lambs, suffering from this disease, have been submitted for examination. In addition to cases presented for examination, a number of inquiries regarding it have been received both by correspondence and telephone.

Accordingly, a few observations regarding the condition may be of value. Very little is known regarding the disease, but there is an indication that it is becoming more prevalent.

The disease is one in which stiffness of gait and paralysis of the limbs are the most striking symptoms. As a rule, it develops in lambs from two to eight weeks of age, shortly after they are turned out on pasturage. A few cases have been reported before being put on pasture. The site of the disease appears to be in bundles of muscle fibres that have undergone a degenerative process, leaving them pale and whitish in colour, as compared with normal muscle. The larger groups of muscles; such as, the gluteals of the hind leg and the caputs of the fore leg, are most often affected. The whitish appearance of the affected tissues can be observed easily with the naked eye when the skin and fascia are removed.

The cause of the disease is unknown but cases of this nature have been reported in United States and Canada. Generally speaking, the better lambs of the flock are the ones most frequently affected. It has been suggested that it may be a metabolic disease, due to heavy protein feeding, lack of exercise, and other mismanagement of the pregnant ewes prior to the birth of the lambs. This claim, regarding the cause, has been proven experimentally in a lot of ewes heavily fed and closely confined whose lambs developed the disease while the lambs from a control group of ewes remained free from the disease. The latter group of ewes was exercised regularly and fed a more balanced ration.

The symptoms observed are, at first, difficulty in rising and following the ewe. The stiffness and reluctancy in moving are followed soon by paralysis and the inability to rise. Flexion of the hock and fetlock joints may be noticed. Owing to their inability to nurse, they quickly lose flesh, become dehydrated, and, in a few days, succumb. There is not any apparent systemic reaction as the temperature remains normal, and they will nurse when held to reach the mother's teats. In the latter stages of the condition, convulsions may be observed.

There is no effective treatment but the proper management and care regarding exercise and housing and the provision of a suitable ration during pregnancy will prevent its occurrence. With reference to feeding, mixed hay and a little corn silage or roots are suitable for roughage. A grain mixture of oats, 50 lbs., bran, 40 lbs., and oil-cake, 10 lbs., fed in sufficient amounts to insure variety in the diet, is acceptable.

As examples of outbreaks of disease in which investigational visits were made, the following are reported:

SUSPECTED EQUINE ENCEPHALOMYELITIS

R. A. McINTOSH, M.D.V., B.V.Sc.

On August 2nd, 1938, Dr. J. Johnson, of Waterloo, called, requesting consultation regarding an outbreak of disease among horses on a farm in the vicinity of Drayton, Ontario.

Dr. Johnson had visited the farm on the previous evening when he found one horse dead which had been destroyed by the owner and a second one in a dying condition which he himself destroyed. The heads from these two animals were brought to the College at once. A third horse was sick and showing symptoms somewhat similar to those described for the dead animals. The patient appeared weak, had muscular tremors, was unable to swallow, somewhat fevered, and very dull and depressed. This patient was treated.

The following morning (at which time the writer accompanied Dr. Johnson), the symptoms recorded in the treated case were still in evidence, although the owner felt that the patient was somewhat improved. At this time, the owner reported that he had lost another horse on another farm which he and his son were operating together. This farm was about eight miles from the home farm and their horses had been together prior to the commencement of harvesting operations—a week before. Accordingly, we visited the second farm on which one horse had died and another was sick. This last case had been treated the day before by Dr. Adams of Elmira. When examined by us, she was down and unable to rise. She was very stupid, could not swallow, and the mucous membranes were icteric. There was a gastrointestinal and urinary stases.

During the time the examination of the down animal was being made, the son came in with three other horses off the binder. The temperatures of all three of these animals were taken and found to be 101.2° F., 105.4° F., and 103.2° F. The horse showing the greatest degree of fever was led out to water but could not drink and did not show any desire to eat in the stall. This, we felt, was another case of the same nature in an earlier stage. The third horse whose temperature was 103.2° F. drank greedily and ate when placed in the stall.

At this time, the senior farmer volunteered the information that he had noticed the first two horses which had died on the home farm were sluggish at their work on the binder on the previous Wednesday, Thursday, and Friday. They had not been worked Saturday and died Sunday evening. He also informed us that all of these horses had been turned out at nights in a swampy, bush pasture at the back of the farm where mosquitoes and biting flies were prevalent.

Later, the third horse on the home farm and the down horse on the second farm died. This made a total of five horses lost within a few days. The horse with the high temperature recovered somewhat but died about three weeks later from other causes.

A diagnosis of Encephalomyelitis was made but it is very remarkable that no other horses in that district were reported to have been sick or died from a similar affection. Guinea pig inoculations of brain substance failed to reveal a virus.

BOTULISM IN HORSES

R. A. McINTOSH, M.D.V., B.V.Sc.

This investigation was made at the request of the owner of the horses affected and in corroboration with the Veterinarian in attendance. The condition occurred on a farm in Halton County about April 20th, 1939.

On inquiry into the occurrence of the disease, the owner stated he had lost three brood mares, all in foal, in the last three days. The first one was noticed somewhat indisposed Thursday morning, April 20th. That evening, Dr. Pinkney, of Cooksville, was called and examined the patient and found her very dull, depressed, and stupid. She died during the night. The second became sick Friday morning, April 21st, and again Dr. Pinkney and Dr. LeGard were called, and a diagnosis of Botulism was made. This mare died that afternoon. The third mare also took sick on Friday and died during the following night.

There were eight horses all told on the premises. Dr. Pinkney injected all of the animals with Botulinus Antitoxin. At this visit when the remainder of the animals were examined, it was determined that two others were somewhat affected. The findings regarding these animals are as follows:

Black Percheron Filly, Two Years Old—The owner stated that he thought she seemed dull and sick in the morning. Her temperature was 101.2 and the pulse, 40, respirations, normal, mucous membranes about normal in appearance but possibly congested. At this time, she seemed bright, could move normally, and swallowed both food and water without difficulty.

Grey Percheron Filly. Three Years Old—She was noticed sick Saturday morning, had been up and down a good deal during the day, and appeared gaunt. Her temperature was 101.5, pulse, 50, respirations, 22, and mucous membranes normal. This patient could not swallow. She tried to drink and also eat chop, could get some of it into her mouth but was unable to swallow. No incoordination of movement was noticed.

Grey Percheron Filly, Two Years Old—This colt also seemed dull and depressed and was down in the morning. She also tried to eat and drink but could not swallow. Her temperature was 100.6, pulse, 42, respirations, 18, and mucous membranes, normal. By coaxing and working with her for a time, she was able to drink about two quarts of water.

Grey Percheron Colt, One Year Old—This one had not been sick. Her manger and oat box were empty and she had not stopped feeding. Her temperature was 101.2, pulse, normal, and respirations, 20, mucous membranes, normal.

The other horse was twenty-eight years old, bay mare, who was not affected in any way and was not examined.

On inquiring into the character of the feed, it was learned that about three weeks ago the owner started drawing two-year-old hay out of an old barn across the highway in which it had been stored. This old hay was out of the bottom of the mow, and he stated that there might be hay in it five or six years old.

An inspection of this hay did not reveal what could be looked upon as badly damaged or spoiled hay, but it did not smell as good as the hay in the home barn which had been fed until recently. The animals were watered from a cistern in the barn, the water supply of which is usually pumped in, but, about two weeks before, Mr. Conover turned the down spouts of the eave troughing into it during a rain, and it was felt that the stirring up of the sediment in the cistern might have had something to do with it.

The history, circumstances, and clinical picture of this outbreak definitely indicate Food Poisoning or Botulism. The owner was advised to discontinue feeding the hay from the old barn and the handling of the sick animals discussed with the Veterinarian in charge. Later, it was learned that both of those animals, showing definite symptoms, recovered, although the more seriously affected one did not do well until turned out on pasturage.

Remarks: In the foregoing reports of investigations in horse disease, two different conditions are reported and a third one mentioned. In all three conditions, the symptoms are very much alike, thus making a differential diagnosis somewhat difficult. This is particularly true of Encephalomyelitis and the so-called X-disease that occurs concurrently. There are, however, certain features of outbreaks of Botulism or Food Poisoning that are somewhat significant and enable differentiation to some extent, at least. While clinical differentiation is difficult, laboratory findings and animal inoculations are disappointing quite often. This is particularly true when dealing with virus and toxic diseases as the foregoing. It, therefore, behooves all who are concerned with the handling of such condition to thoroughly acquaint themselves with every aspect of them and use good judgment in making decisions regarding them.

ANNUAL REPORT

OF THE

Department of Highways

ONTARIO

FOR THE FISCAL YEAR ENDING MARCH 31st
1939

PRINTED BY ORDER OF
THE LEGISLATIVE ASSEMBLY OF ONTARIO

SESSIONAL PAPER No. 32, 1940

ONTARIO

TORONTO
Printed and Published by T. E. Bowman, Printer to the King's Most Excellent Majesty
1940

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To The Honourable Albert Matthews, LL.D.,
Lieutenant-Governor of the Province of Ontario.

May it Please Your Honour:—

The undersigned has the honour to transmit the Annual Report of the Department of Highways, Ontario, for the fiscal year ending March 31st, 1939.

Respectfully submitted,

T. B. McQuesten,
Minister

Department of Highways, Ontario,
Toronto, October 26th, 1939.

To The Honourable T. B. McQuesten, K.C., B.A., LL.B.,
Minister of Highways, Ontario.

Sir:—

I have the honour to present herewith Report on the activities of the Department of Highways for the Fiscal Year ended 31st March, 1939.

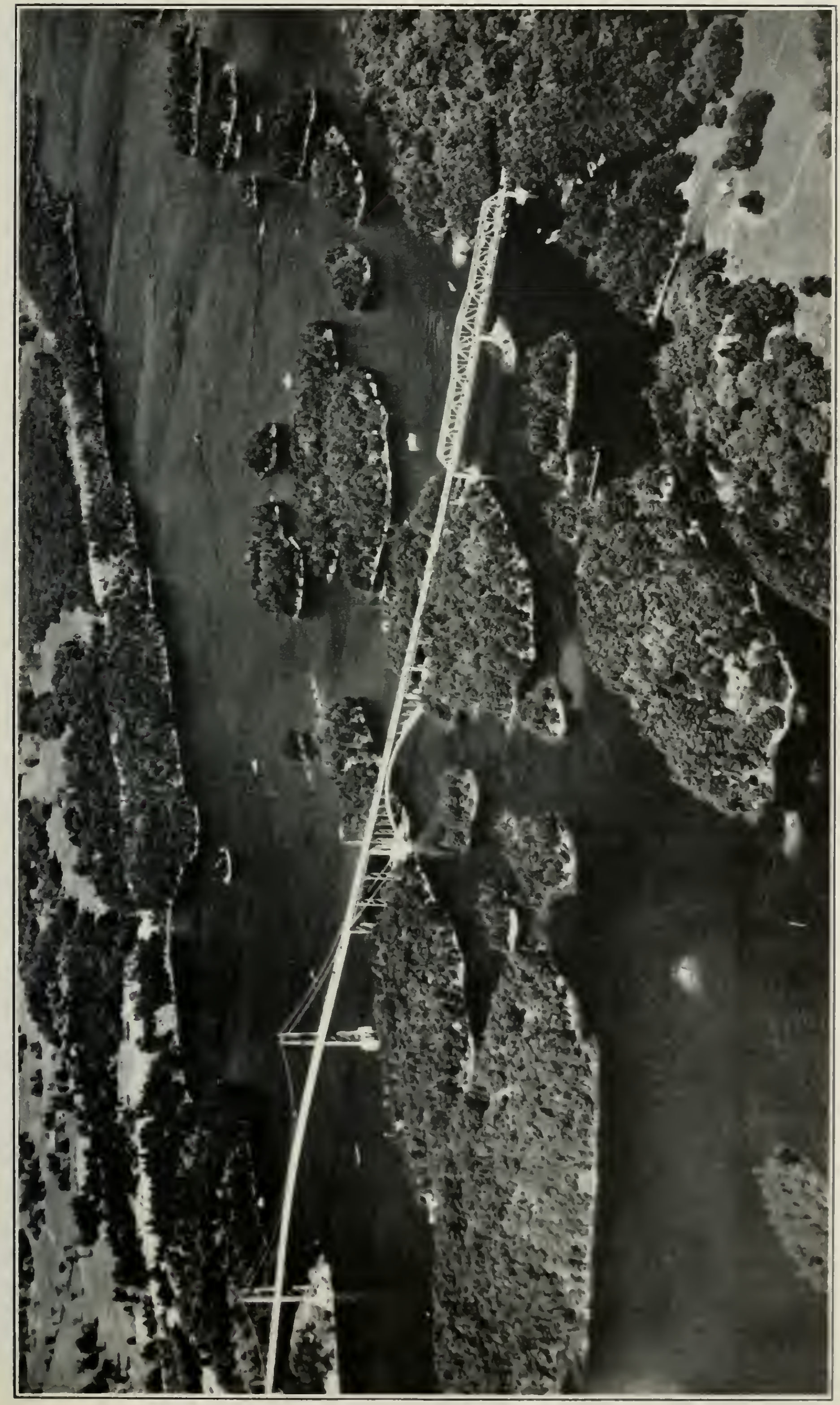
The Report covers operations and functions performed by the various branches, including King's Highways, Municipal Roads, Bridge Construction, Accounting, Gasoline Tax and Motor Vehicles.

I have the honour to be, Sir,

Your obedient servant,

R. M. Smith,
Deputy Minister.

Department of Highways, Ontario.
Toronto, October 26th, 1939.

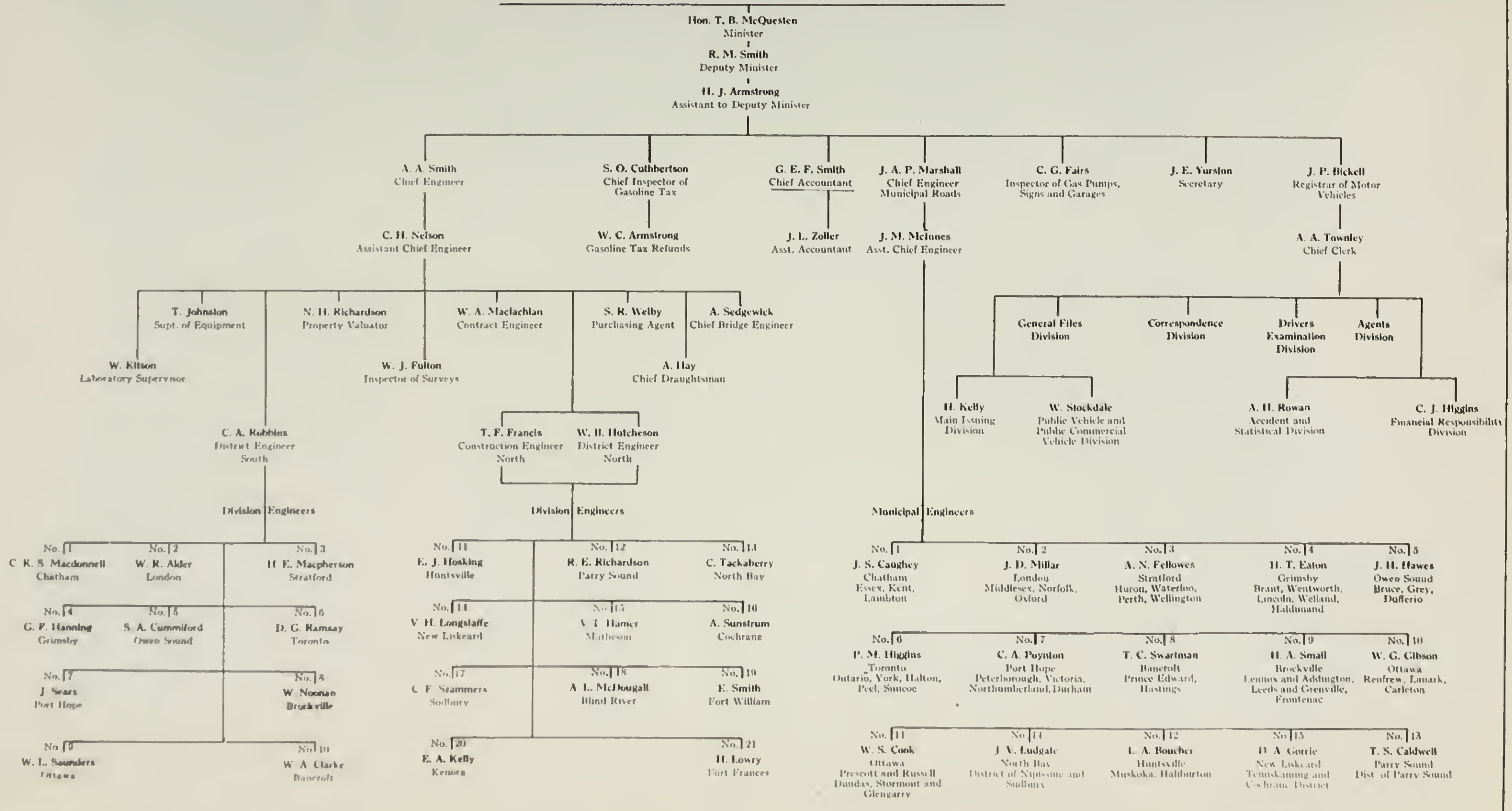


1000 ISLAND BRIDGE—CANADIAN SECTION.

1938

ORGANIZATION CHART

DEPARTMENT OF HIGHWAYS ONTARIO


Hon. T. B. McQuesten
Minister
R. M. Smith
Deputy Minister
H. J. Armstrong
Assistant to Deputy Minister
A. A. Smith
Chief Engineer
S. O. Cuthbertson
Chief Inspector of Gasoline Tax
G. E. F. Smith
Chief Accountant
J. A. P. Marshall
Chief Engineer Municipal Roads
C. G. Fairs
Inspector of Gas Pumps, Signs and Garages
J. E. Yurston
Secretary
J. P. Bickell
Registrar of Motor Vehicles
C. H. Nelson
Assistant Chief Engineer
W. C. Armstrong
Gasoline Tax Refunds
J. L. Zoller
Asst. Accountant
J. M. McInnes
Asst. Chief Engineer
A. A. Townley
Chief Clerk
T. Johnston
Supt. of Equipment
N. H. Richardson
Property Valuator
W. A. Maclachlan
Contract Engineer
S. R. Welby
Purchasing Agent
A. Sedgewick
Chief Bridge Engineer
W. Kitson
Laboratory Supervisor
W. J. Fulton
Inspector of Surveys
A. Hay
Chief Draughtsman
General Files Division
Correspondence Division
Drivers Examination Division
Agents Division
H. Kelly
Main Issuing Division
W. Stockdale
Public Vehicle and Public Commercial Vehicle Division
A. H. Rowan
Accident and Statistical Division
C. J. Higgins
Financial Responsibility Division
C. A. Robbins
District Engineer South
T. F. Francis
Construction Engineer North
W. H. Hutcheson
District Engineer North
Division Engineers
No. 1
C. K. S. Macdonnell
Chatham
No. 2
W. R. Alder
London
No. 3
H. E. Macpherson
Stratford
No. 4
G. F. Hanning
Grimsby
No. 5
S. A. Cummiford
Owen Sound
No. 6
D. G. Ramsay
Toronto
No. 7
J. Sears
Port Hope
No. 8
W. Noonan
Brockville
No. 9
W. L. Saunders
Ottawa
No. 10
W. A. Clarke
Bancroft
Division Engineers
No. 11
E. J. Hosking
Huntsville
No. 12
R. E. Richardson
Parry Sound
No. 13
C. Tackaberry
North Bay
No. 14
V. H. Longstaffe
New Liskeard
No. 15
A. T. Hamer
Matheson
No. 16
A. Sunstrum
Cochrane
No. 17
C. F. Scammers
Sudbury
No. 18
A. L. McDougall
Blind River
No. 19
E. Smith
Fort William
No. 20
E. A. Kelly
Kenora
No. 21
H. Lowry
Fort Frances
Municipal Engineers
No. 1
J. S. Caughey
Chatham
Essex, Kent, Lambton
No. 2
J. D. Millar
London
Middlesex, Norfolk, Oxford
No. 3
A. N. Fellowes
Stratford
Huron, Waterloo, Perth, Wellington
No. 4
H. T. Eaton
Grimsby
Brant, Wentworth, Lincoln, Welland, Haldimand
No. 5
J. H. Hawes
Owen Sound
Bruce, Grey, Dufferin
No. 6
P. M. Higgins
Toronto
Ontario, York, Halton, Peel, Simcoe
No. 7
C. A. Poynton
Port Hope
Peterborough, Victoria, Northumberland, Durham
No. 8
T. C. Swartman
Bancroft
Prince Edward, Hastings
No. 9
H. A. Small
Brockville
Lennox and Addington, Leeds and Grenville, Frontenac
No. 10
W. G. Gibson
Ottawa
Renfrew, Lanark, Carleton
No. 11
W. S. Cook
Ottawa
Prescott and Russell Dundas, Stormont and Glengarry
No. 14
J. V. Ludgate
North Bay
District of Nipissing and Sudbury
No. 12
L. A. Boucher
Huntsville
Muskoka, Haliburton
No. 15
D. A. Gorrie
New Liskeard
Temiskaming and Cochrane District
No. 13
T. S. Caldwell
Parry Sound
Dist. of Parry Sound

ONTARIO AND ITS HIGHWAYS

By R. M. Smith, Deputy Minister

The Revenue of the Department for the twelve months ending March 31st, 1939, was approximately $600,000.00 less than for the previous fiscal year; $26,531,148.71 compared with $27,138,262.55. Gasoline Tax increased by about $900,000.00, while Motor Vehicles decreased by over $800,000.00. The balance of the net decrease is due chiefly to the item of Road Assessments and Interest on these outstanding accounts. The policy of assessing Counties for King's Highway work was done away with at the close of the fiscal year ending March 31st, 1935, and outstanding accounts have about all been paid.

Total Expenditure was just under $42,000,000.00 compared with $43,702,000.00 the previous year; the difference is made up of a decrease of about $2,100,000.00 on King's Highways and Secondary Trunk Roads, an increase of $600,000.00 in grants to Counties and Townships and a decrease of over $150,000.00 in Administration and Equipment costs.

Many large highway construction projects begun in the previous year were completed during this year and other new projects started. A fair portion of the work was of the new type of Divided Highways. Whatever the type of construction, the safety of the motorist was the first consideration. This was stressed in improved curves and grades, safer ditches, reflector signs, zone painting, lighting and traffic signals. Several obsolete bridges were replaced with new modern structures. In keeping with modern day highway development, emphasis was placed on roadside embellishment; sodding and planting on boulevards and slopes adding much to the beautification of the highways.

All gravel roads were treated with dust layer during the summer, while in the winter snow ploughing and ice sanding contributed to the safety and comfort of the motorist and thus permitted an uninterrupted use of the highways throughout the year.

On March 31st, 1939, the total length of King's Highways was 7,242.27 miles.

Northern Ontario again received a large share of construction work during this twelve months and both construction and maintenance was of the same high standard as in Southern Ontario, bringing the North closer to the South and providing the miner, the lumberman and the tourist alike with modern facilities for developing this natural treasure chest and enjoying its beauty.

The thanks of this Department is extended to engineers of counties, townships and suburban commissions for their untiring efforts to continually improve the network of highways throughout the counties and municipalities of the Province.

Motor Vehicle registrations reached a new high total in 1938, exceeding 700,000 for the first time. Likewise, more drivers' licenses were issued than ever before, the total being in excess of 975,000.

These increases together with more tourists entering Ontario than ever before made an unprecedented volume of traffic on our highways. It is therefore very gratifying to be able to report a decrease in accident fatalities for the first time in several years. Total highway accidents of all kinds showed a decrease also. This is due to three main factors: the improved construction and maintenance standards, increased activity of the financial responsibility division and more effective patrolling of the highways by the traffic police.

Reports in detail of the various branches of the Department of Highways, submitted on the following pages, will be found of value and interest to every user of the King's Highways.

REPORT OF THE HIGHWAYS ACCOUNTANT

By G. E. F. Smith, Chief Accountant

To R. M. Smith, Esq.,
Deputy Minister of Highways,

The following is a summary of the Net Expenditure and Revenue for the fiscal year, April 1st, 1938, to March 31st, 1939:

Expenditure	
King's Highways, Connecting Links, etc.	$ 30,769,590.34
Secondary Trunk Roads, etc.	4,485,627.91
Grants to Counties	2,342,971.65
Grants to Townships	2,557,327.40
Administration Equipment, etc.	1,821,639.39
	$ 41,977,156.69
Revenue	
Gasoline Tax	$ 18,508,746.55
Motor Vehicles	7,902,657.35
Permits, Garages, Signs, etc.	99,490.50
Miscellaneous Sales	13,095.76
Sundries	5,475.85
Road Assessments	1,143.80
Interest	538.90
	$ 26,531,148.71

No grants or subsidies in respect of township road expenditures were paid under Colonization Road By-Laws or Northern Development Agreements.

A subsidy on the amount of its road expenditures was paid to each Northern Ontario township that had carried out the required provisions of the Highway Improvement Act. All townships, as far as road expenditures are concerned, are now governed by this Act.

As in previous years the books of each municipality accepting aid under the Highway Improvement Act were audited by the Accounting Department.

REPORT OF GASOLINE TAX REVENUE

By S. O. Cuthbertson, Chief Inspector, Gasoline Handling Act

To R. M. Smith, Esq.,
Deputy Minister of Highways.

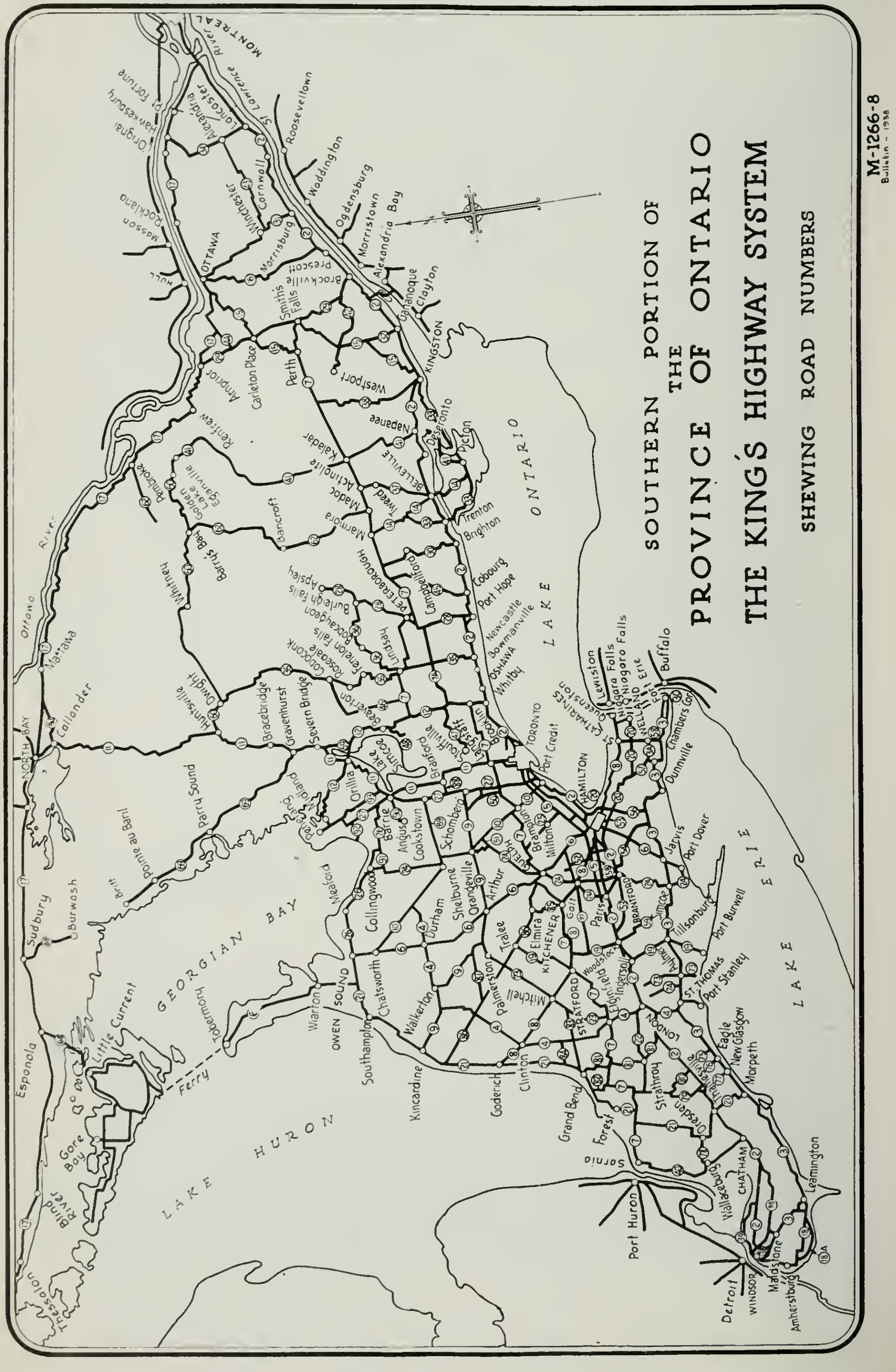
The gross gasoline tax collections for the Province for the fiscal year, April 1st, 1938, to March 31st, 1939 (both dates inclusive), amounted to $20,125,036.04.

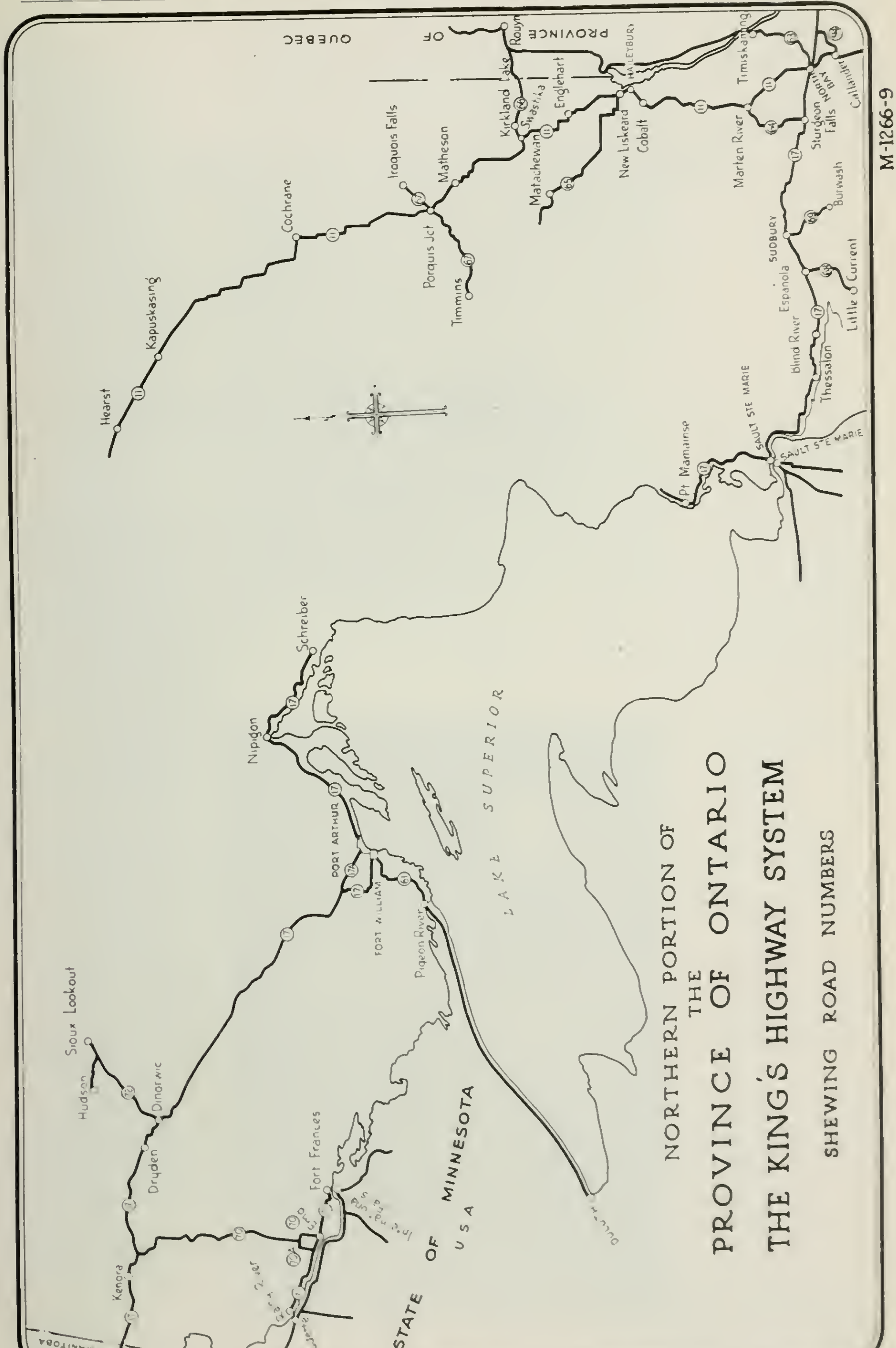
For this same period there was refunded to farmers, manufacturers, airplane users, etc., the amount of $1,621,247.14.

After having refunded the aforementioned amount, the net gasoline tax for the period was $18,503,788.90, being an increase of over three-quarters of a million dollars compared with the previous year.

The Gasoline Tax Act was amended at the 1939 session of the Legislature, at which time the rate of taxation on gasoline was increased from 6c per Imperial gallon to 8c per Imperial gallon, effective midnight, March 31st, 1939. The effect of the increased rate of taxation will not be reflected in the records of the Department until the ensuing year.

S. O. Cuthbertson,
Chief Inspector Gasoline Tax.


SOUTHERN PORTION OF
THE
PROVINCE OF ONTARIO
THE KING'S HIGHWAY SYSTEM
SHEWING ROAD NUMBERS
M-1266-8
Bulletin - 1938
LAKE ONTARIO
LAKE ERIE
LAKE HURON
GEORGIAN BAY
Ottawa River
St. Lawrence River
MONTREAL
L'Orignal
Hawkesbury
Pt. Fortune
Alexandria
Lancaster
Rooseveltown
Cornwall
Winchester
Waddington
Ogdensburg
Morrisburg
Prescott
Brockville
Morristown
Alexandria Bay
Gananoque
Clayton
Rockland
Masson
Hull
OTTAWA
Smiths Falls
KINGSTON
Westport
Perth
Carleton Place
Arnprior
Renfrew
Pembroke
Napanee
Deseronto
Picton
Kaladar
Actinolite
BELLEVILLE
Madoc
Tweed
Trenton
Brighton
Marmora
Bancroft
Golden Lake
Eganville
Barrys Bay
Whitney
PETERBOROUGH
Campbellford
Cobourg
Port Hope
Newcastle
Bowmanville
OSHAWA
Whitby
Apsley
Burleigh Falls
Bobcaygeon
Fenelon Falls
Lindsay
Rosedale
Coboconk
Beaverton
Mattawa
Callander
NORTH BAY
Huntsville
Dwight
Bracebridge
Gravenhurst
Severn Bridge
Orillia
Lake Simcoe
Bradford
Stouffville
Brooklin
TORONTO
Port Credit
HAMILTON
ST. CATHARINES
Queenston
Lewiston
Niagara Falls
NIAGARA FALLS
WELLAND
Ft. Erie
Buffalo
Chambers Cor.
Dunnville
Jarvis
Port Dover
Midland
Penetang
Parry Sound
Pointe au Baril
Britt
Sudbury
Burwash
Barrie
Angus
Cookstown
Schomberg
Brampton
Milton
GUELPH
Collingwood
Meaford
Durham
Shelburne
Orangeville
Arthur
Elmira
KITCHENER
Galt
Paris
BRANTFORD
Simcoe
Tillsonburg
Port Burwell
Aylmer
ST. THOMAS
Port Stanley
Woodstock
Ingersoll
STRATFORD
Embro
Mitchell
Palmerston
Tralee
Walkerton
Chatsworth
OWEN SOUND
Wiarton
Southampton
Kincardine
Goderich
Clinton
LONDON
Grand Bend
Forest
Strathroy
Thamesville
Eagle
New Glasgow
Morpeth
Dresden
Sarnia
Port Huron
Wallaceburg
CHATHAM
Leamington
WINDSOR
Detroit
Maidstone
Amherstburg
Little Current
Espanola
Gore Bay
Tobermory
Ferry
Blind River
Thessalon



NORTHERN PORTION OF
THE
PROVINCE OF ONTARIO
THE KING'S HIGHWAY SYSTEM
SHEWING ROAD NUMBERS

M-1266-9

PROVINCE OF MANITOBA
PROVINCE OF QUEBEC
STATE OF MINNESOTA
U S A
LAKE SUPERIOR
Kenora
Dryden
Dinorwic
Hudson
Sioux Lookout
Fort Frances
Port Arthur
Fort William
Pigeon River
Nipigon
Schreiber
Hearst
Kapuskasing
Cochrane
Iroquois Falls
Porquis Jct
Matheson
Timmins
Kirkland Lake
Rouyn
Swastika
Matachewan
Englehart
Haileybury
New Liskeard
Cobalt
Timiskaming
Marten River
North Bay
Callander
Sturgeon Falls
Burwash
Sudbury
Espanola
Little Current
Blind River
Thessalon
Sault Ste Marie
Pt Mamainse
Duluth
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71
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94
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ANNUAL REPORT FOR 1938

KING'S HIGHWAY OPERATIONS

A. A. Smith, Chief Engineer

The entire King's Highway System was maintained in an excellent state of repair. All the King's Highways in the South and most of the leading roads in the North were kept open for winter traffic and the ice hazard was kept to a minimum by the increased sanding program.

As in the past the Department laid great stress on safety. The cross sections now in use eliminate all deep ditches near the travelled portion of the road. Horizontal curves are being constructed with a sufficiently large radius to eliminate the necessity of banking and on all vertical curves vision has been increased to 1,000 feet. The use of reflector signs which decreases the strain of night driving was increased during the past year and this together with an extension of the mileage of zone painting has resulted in a greater degree of safety being attained than ever before.

Highway Lighting — curve east of Oakville.

Lighting Maintenance

Road Lighting

During the year modern lighting was installed on 9.6 miles of divided motorways from the Port Credit Cloverleaf on the Queen Elizabeth Way Westerly to one mile West of Oakville side road, giving a continuous stretch of 14 miles of lighted road.

Incandescent units were used generally with sodium lights at important intersections on this road. This arrangement has proved very satisfactory.

Sodium lighting was installed on the Ontario section of the Sarnia-Port Huron Bridge and on the Canadian approach.

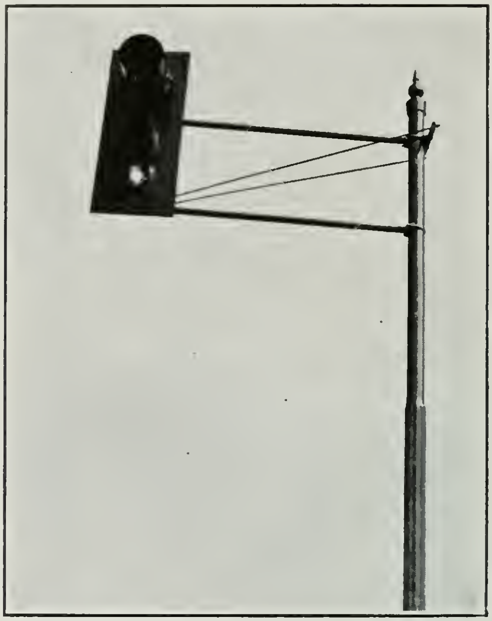
Traffic Signals

Traffic signals were installed at 6 locations. Of these 3 are of the traffic actuated type, two of the fixed time type and one at a school crossing which has the push button control and is operated by the teacher in charge.

The traffic actuated type were installed at the following points — No. 3 and Ridge Road at Ridgeway; No. 3A at North end of Welland; Aldershot on Middle Road. The two fixed time type were installed; one at Galt at the intersection of the Preston and Hespeler Road; the other at Ridgeway at the intersection of Dominion and Ridge Roads.

The push button operated signal was installed opposite the school on the Queen Elizabeth Way at Burlington Clover Leaf.

Experiments were carried out with 100% larger lens for the red signal. The results were so satisfactory that this size lens is being adopted as a standard for future installations.



Typical Traffic Signal

Backgrounds or targets were developed for all signals to give better visibility in the daytime. There was considerable improvement in making the red light noticeable.

An illuminated direction sign was designed and a sample installed, on the Burlington Beach Road at junction with Queen Elizabeth Way.

In South Western Ontario several miles of hard surface roads were built. The approach to the International Bridge at Point Edward was completed and paved. The Bridge at Port Stanley was completed and opened for traffic. Pavement was constructed in the vicinity of Ailsa Craig and Park Hill and the divided motorway completed between Freeport and Galt.

In Central Ontario work on the divided motorway between Fort Erie and Oshawa was actively proceeded with, with a major portion of the work being undertaken in the Niagara Peninsula where grading for the Traffic Circle at Stoney Creek was commenced and a number of bridges were started.

Work was also undertaken at the Western entrance of the City of Toronto and the grading of the new right-of-way undertaken from Toronto Easterly.

The grading of the divided motorway from Belleville easterly was completed.

In Eastern Ontario the International Bridge at Ivy Lea was completed and opened for traffic and work was continued on the divided motorway between Gananoque and Brockville.

In Northern Ontario, the re-construction of Highways Nos. 11 and 17 to a Class "A" standard, which was commenced during the previous year, was actively continued and many sections of the road between North Bay and Timmins, and also between North Bay and the Soo was completed.

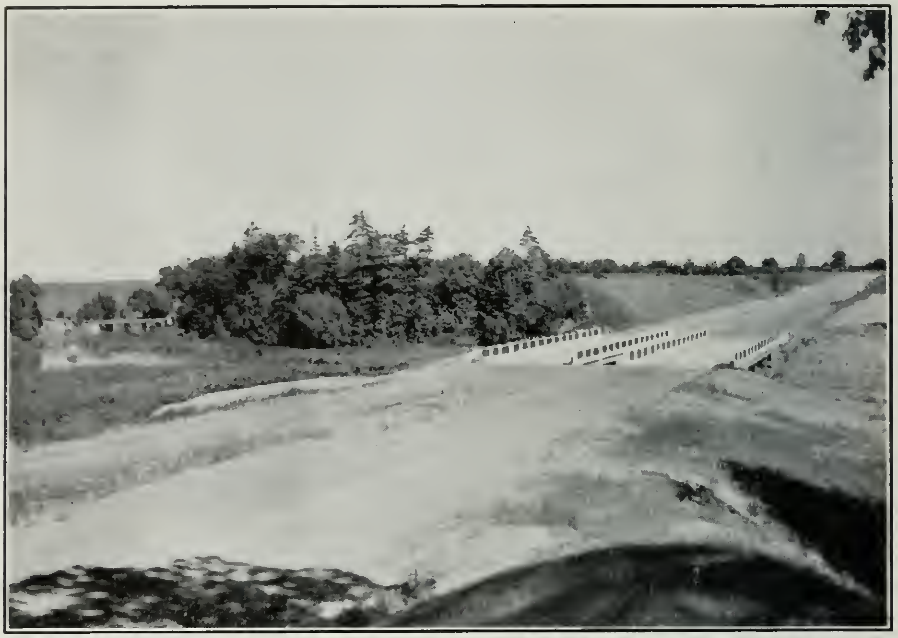
On the sections of the grade completed during the previous year which were properly consolidated, paving has been added. These jobs included nine miles of mixed macadam between New Liskeard and Englehart, and concrete paving east of Schumacher in the Timmins area; also in the vicinity of Blind River, east and west of Spanish, and south of Echo Bay on Highway No. 17. The major grading operations carried out in the Northwesterly divisions, included the active continuation of construction between Nipigon and Beardmore which was carried out during the winter months under a Federal-Provincial Agreement, also the re-grading of portions of Highway No. 70 north of Nestor Falls and in the vicinity of Blindfold Lake. A mixed macadam was laid on the Dawson road west of Port Arthur and also this type of pavement was carried through from West of Kenora to the Manitoba boundary and east to the junction of Highways Nos. 17 and 70. A further six miles of this pavement was laid South on Highway No. 17 from the junction.

Several bridges, replacing old obsolete structures on which construction was started during the previous year, were completed, the most notable of these being the Keewatin Channel bridge, Cameron Bay Bridge, Frogs Rapids Bridge, and the Burks Falls bridge; also the Commanda overhead on Highway No. 17 a short distance west of North Bay.

During the winter months, considerable clearing and grading was carried out in the various divisions in the North under Federal-Provincial Agreement. During the season, thirty-eight mining road projects were also carried out under agreement with the Federal authorities, and altogether some two hundred and seventy-five miles of road and trail improvement was carried out as an assistance to various mining interests.

As in previous years, dust layer was extensively applied to all gravel roads with an effort to keep this hazard down to a minimum.

Looking north — Highway No. 11 at Temagami.



16 Mile Creek Bridge — Queen Elizabeth Way.

At the end of the 1938 fiscal year ending March 31st, 1939, the total mileage of the different types of surfaces on roads comprising the King's Highway System was as follows:

Concrete	1,685.08	Miles
Asphalt	358.87	"
Mixed Macadam	651.59	"
Retread	310.75	"
Penetration	340.41	"
Macadam	173.07	"
T. B. Macadam	15.61	"
Stabilized Gravel	7.04	"
Gravel	3,699.85	"
Total	7,242.27	"

Mileage constructed during fiscal year ending March 31st, 1939, was as follows:

Concrete — 10 feet wide	19.56	Miles
" — 20 " "	43.53	"
Mixed Macadam	76.08	"
Retread (Plant Mix)	12.47	"
Bituminous Penetration	30.11	"
Grading	295.00	"
Total	476.75	"

Surveys' Branch

Land Surveys were made affecting over 2600 owners. This entailed the surveying and monumenting of 580 miles of widened highway and the planting of 4700 monuments to define the new limits of the right-of-way.

In addition to the road widening, 80 gravel pits were surveyed and 22 miles of original road allowance staked out for statute labor work in the North.

Fifty-four surveys were made for the purpose of defining building lines, new fence lines or gas pump locations on highways which had not been previously surveyed and on which the right-of-way limits were not clearly marked on the ground.

Two surveys were made for the Department of Agriculture and eight surveys were made for the Department of Public Works. These Public Works surveys were in connection with four hospitals and four fish hatcheries. The surveys included a condition survey of the site and complete contour plans together with O. L. S. surveys to acquire the property.

Of these surveyed highways, 114 miles were of the new divided lane type and included the Brockville-Gananoque Highway, 30 miles; Queen Elizabeth Way, Brown's Line to St. Catharines, 66 miles; Toronto to Highland Creek, 9 miles; Windsor toward Maidstone, 5 miles; Port Edward Easterly to Highway No. 7, 4 miles. The right-of-way for these was from 150 to 200 feet in width and about 80% of this right-of-way did not follow or develop existing roads but was entirely new right-of-way across private property and consequently involved many additional severance surveys for the purpose of the settlement of claims and for arbitrations.

Grading, looking west — west of Whitby.

The Surveys' Branch also made 61 new locations which involved 650 miles of road traverses, diversions, profiles, cross-sections and contours and included soundings where the footings were at all doubtful. The more important of these were as follows:

New Liskeard-Elk Lake	18	Miles
Latchford-New Liskeard	16	"
Highland Creek-Bowmanville	30	"
Niagara Falls-Fort Erie	16	"
Round Lake-Kenogami	21	"
Whitefish-Nairn	23	"
Sudbury-Shining Tree	20	"
Barry's Bay-Madawaska	10	"
Burlington-Dundas	10	"
Williamsburg-Quebec Boundary	32	"
Stouffville-Uxbridge	18	"

There were also a number of accident surveys and surveys for the purpose of preparing study plans for intersections which would be used to design grade separations. Check surveys were made on 17 miles of contract cross-sections.

DIVISION No. 1 — CHATHAM

Highway No. 3

One-half mile of concrete pavement was constructed West of Ruthven to eliminate a very sharp curve at this point.

The grading, culvert installation, drainage, etc., for a second roadway between Maidstone and Howard Avenue was completed.

One mile of the old concrete pavement east of Howard Avenue was widened and resurfaced.

Two and a half miles of concrete pavement were constructed from Howard Avenue to the Huron line, this forms the secondary roadway and completes the dual highway over this section.

Highway No. 18

The approaches to the Canard River Bridge, North of Amherstburg, were completed and paved.

Highway No. 21

About 2 miles of concrete pavement laid North of No. 7 Highway completed the pavement to Forest.

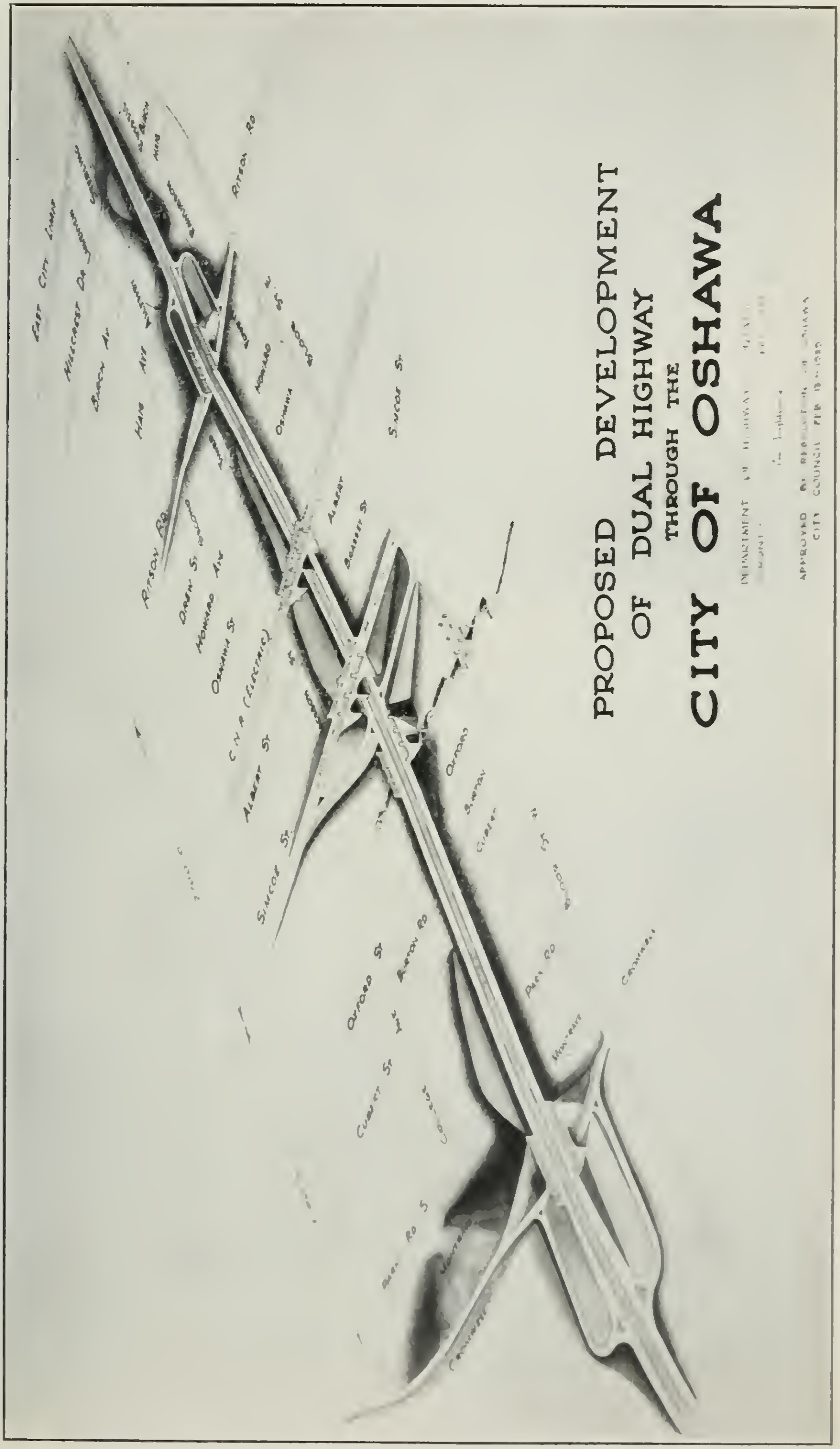
The grading was completed between Forest and the ntersection of Highways No. 21 and No. 82.

International Bridge-Point Edward

The Canadian approach to this structure was completed, consisting of the steel work, concrete deck and erection of lighting system, etc. The plaza was paved, Customs and Emigration Buildings erected and the entire project completed.

Grading was started on a diversion of 3½ miles long, which when completed will serve as an approach to the bridge over a dual highway.

All roads on this division were kept open for winter traffic.


PROPOSED DEVELOPMENT
OF DUAL HIGHWAY
THROUGH THE
CITY OF OSHAWA
APPROVED BY
CITY COUNCIL
EAST CITY LIMIT
HILLCREST DR
BIRCH AV
RITSON RD
HOWARD AV
OSHAWA ST
C N R (ELECTRIC)
ALBERT ST
SIMCOE ST
BLOOR
ALBERT
OXFORD
OXFORD ST
RITSON RD
CUBERT ST
PARK RD
PARK RD S

Division No. 2 — London

Highway No. 4

A double leaf deck Bascule Lift Bridge over Kettle Creek in the village of Port Stanley was completed and opened for traffic.

Highway No. 6

Grading was completed on a straight alignment at a level crossing with the C. N. R. south of Hagersville to eliminate a reverse curve.

Highway No. 7

The completion of 3 miles of concrete pavement 20 feet in width and one mile of 10 ft. concrete made the pavement continuous between Ailsa Craig and Parkhill.

Highway No. 19

The south concrete bridge in the village of Vienna was completed and three quarters of a mile of bituminous laid in the village.

Highway No. 53

Three and one-third miles of concrete pavement was laid between Eastwood and the Oxford-Brant County Boundary.

Highway No. 73

North and south of Aylmer 4¼ miles of concrete pavement were laid.

Highway No. 74

South of Mapleton a 50-foot concrete span was partially completed and approaches constructed on a new alignment, replacing an old steel structure.

Ninety-three miles of road were given a light coat of gravel and 79 miles treated with dust layer.

All roads on the division were kept open for winter traffic.

Curve and Stop Hill on Old Road — two miles south of Temagami, Highway No. 11.

Rock cut, looking north, one mile north of Temagami, Highway No. 11.

Division No. 3 — Stratford

Highwey No. 4

Crushed gravel was applied from Wingham to Highway No. 9.

Highway No. 8

The dual pavement started in 1937 was completed between Galt and Freeport, there being slightly over a mile of 10-foot pavement, over 3.5 miles of 20-foot pavement and a half mile of 40-foot being laid during the construction season.

Highway No. 19

Over five miles of concrete pavement mostly 10-foot in width, completed pavement between Milverton and Stratford.

Highway No. 23

A bridge was constructed near Kirkton and the grading started in 1937, completed.

Highway No. 83

A bridge three miles east o Exeter was built and the whole road given a coat of gravel

Highway No. 85

Widening and resurfacing of the existing pavement started in 1937, was completed.

Highway No. 86

A light coat of gravel was applied from Lucknow to Amberley and from Dorking to Highway No. 7.

All the roads on the division were kept open for winter traffic

Division No. 4 — Grimsby

New Dual Highway, Toronto-Fort Erie

At Stoney Creek a considerable amount of grading was done for a traffic circle at the intersection of this road and Highway No. 20. This circle is one-half mile around, all in cut, the excess material was used to fill in swamp area between the circle and Burlington Beach. Some sodding was placed on the slopes. Two subways were constructed for the traffic circle under the C. N. Railway.

Grading east from the circle was completed as far as Martindale Road except for approaches to several bridges. The road was stoned and opened to traffic as far as Jordan and considerable sodding of the slopes was done. In this section two Red Hill bridges and Grimsby Beach overhead were built and considerable work done on Jordan 15 mile and 16 mile Creek Bridges. On all of the last three a separate bridge is being built for eastbound and westbound traffic.

The foundations were placed for two multiple span concrete arches across the Henley Course at St. Catharines and the superstructure was about three quarters completed, work done in the winter being carried out under heating regulations.

Grading was completed between Niagara St. and Homer Bridge and between Ontario Street and Lake Street. The Homer clover leaf was started, piles were driven for the structure but no concrete placed.

A mile at the south end of the Homer to Stamford section was graded to make the final connection with the Thorold Stone Road, culverts were completed and considerable stone put on the road.

A considerable amount of work was done by Departmental forces between Oakville and Burlington consisting of additional catch water ditches, sodding slopes and fine grading and landscaping the boulevard and Cloverleaf.

Jordan Harbour — Queen Elizabeth Way.

Rouge Hill, looking east — Highway No. 2.

Highway No. 56

The mixed macadam laid between Binbrook and Blackheath in 1937, was surface treated.

Highway No. 25

Two large culverts which were dangerously narrow were replaced.

All the roads on the division were kept open for winter traffic.

DIVISION NO. 5 — STRATFORD

Highway No. 4

Four miles of 10-foot concrete pavement and one mile of 20-foot concrete completed the pavement between Hanover and Allan Park.

Highway No. 10

Four and one-half miles of concrete pavement laid south from Chatsworth completed the pavement between Port Credit and Chatsworth.

Highway No. 21

Mixed macadam was laid from Jackson to Elsinore with the exception of the top course between Allenford and Elsinore.

From Kincardine to North Bruce a plant mix retread was completed. From Elsinore to Southampton retread was also laid. The grading was completed between Port Elgin and North Bruce.

Surface treatment was applied between Wiarton and Hepworth and north from Meaford.

All roads on the division were kept open for winter traffic

Division No. 6 — Toronto

Highway No. 2

The junction of the Kingston Road and Danforth Avenue, at the Cenotaph, was graded for traffic separation, this entailed the construction of a concrete underpass. About four miles of 1½-inch mulch surface was laid on a four-inch gravel subgrade and storm sewer and culverts installed.

The grading was partially completed between Highland Creek and the Rosebank side road and the culverts installed; about three quarters of a million yards of material were moved at the Rouge Hill. Concrete pedestals were poured for the new bridge at Highland Creek.

From the Rosebank side road easterly towards Oshawa the culverts were completed on 13 miles of new dual highway and 75% of the grading done, also several small bridges were erected.

Highway No. 5

From the Humber Bridge westerly for 1,400 feet the existing asphalt pavement with concrete base was widened to 40 feet. From this point to Lambton Street, a distance of 1,730 feet, two 20-foot lanes were constructed with a five-foot boulevard. From Lambton Street to Church Street the existing asphalt was widened to 40 feet. Curb and gutter was laid on both sides throughout the work.

Highway No. 5A

Eglinton Avenue from Dawes Road to Kingston Road was semistabliized and velvet coat was placed on the surface.

Grading Rouge Hill, looking east — Highway No. 2.

Graders at work — east of Pickering.

Highway No. 7

A new concrete bridge of rigid frame design was constructed over the Rouge River at Unionville, the alignment was straightened and the new approaches graded.

At Concord subway an asphalt top was laid on the old concrete through the subway. Surface treatment was applied from Langstaff East for five miles.

Highway No. 10

The cloverleaf at the junction of Highway No. 10 and Queen Elizabeth Way was completed, this work consisted of such improvements as sodding of all legs and general cleaning up of the whole area.

Highway No. 12

Considerable crushed gravel was placed on the road between Brechin and Beaverton and the shouldering was completed between Atherley and Brechin. Grading was also completed between Orillia and Warminster and between Waubaushene and Port McNicholl.

Highway No. 27

From Elder's Mills to Kleinburg north a distance of 3.3 miles was graded, this section was constructed on a new alignment throughout following the Humber River Valley, necessitating considerable diverting of the river. Three concrete bridges each 190 feet long and two 67-foot spans were completed in 1938, and an asphalt surface laid on the travelled portion.

From Dundas Street to Elder's Mills the road was semistabilized and also from Schomberg to Thornton.

Highway No. 92

The road was graded and stone surfaced from Elmvale to Wasaga Beach.

New Dual Highway — Toronto to Fort Erie

From Salisbury Avenue to Brown's Line grading was started for the dual highway consisting of two 30-foot lanes and a 50-foot boulevard, over each culvert a catch basin was constructed at the center of the boulevard. Dual bridges were constructed over Mimico Creek and a grade separation built over the new highway at Church Street with necessary approaches.

From Brown's Line to Sheridan fine trimming of shoulders and sodding was carried out. From Shooks Hill to Oakville side road a catch water ditch was built on the north side of the highway.

All roads on this division were kept open for winter traffic.

Division No. 7 — Port Hope

Highway No. 2

The grading and culverts on the divided highway from Belleville easterly to Point Anne side road, a distance of 3.2 miles were completed. A mulch surface was applied on both lanes, easterly from C. P. R. level crossing to Point Anne Road.

From Belleville west limits westerly 1.1 miles to Jones Creek the old pavement was resurfaced with one and one-half inch asphaltic cold mix.

Highway No. 7

Culverts were extended and shouldering completed on the concrete pavement east from Peterborough.

Highway No. 14

A penetration macadam was completed from Harold to Marmora, a distance of seven miles.

Looking east from west bank — Henley Bridge.

Highway No. 33

The penetration macadam between Picton and Glenora was shouldered and seal coated.

Concrete pavement was laid from Carrying Place to Consecon, a distance of 4.1 miles.

Highway No. 35

Seven miles of mixed macadam with one-inch trap rock surface course was laid between Fenelon Falls and Cameron.

Two sharp curves north of Lindsay were replaced with reduced curvature and better visibility.

Highway No. 36

Grading and culverts were completed between Burleigh Falls and Buckhorn and bridges constructed over Mississauga and Deer Creeks.

Three miles of rock grading was opened up between Buckhorn and Bobcaygeon during the winter under Federal-Provincial Agreement.

Highway No. 37

The approaches to Tweed Bridge were completed and the bridge opened to traffic.

Grading and culverts were completed on eleven miles of secondary road north and south of Burnt River.

Ten and one-half miles of stone road was surface treated. Ninety per cent of the highway mileage was kept open for winter traffic.

Division No. 8 — Brockville

Highway No. 2

The small bridge east of Cataraqui Railway Crossing was completed. Concrete gutters and catchbasins were added to the dual pavement west of Brockville.

One mile of asphaltic cold mix with trap rock aggregate was laid in the vicinity of the Blue Church west of Prescott on an old concrete pavement where scaling had occurred.

Highway No. 7

Crushed stone was placed on this highway and also stock piled.

Highway No. 29

A retread surface was laid on the base course completed in 1937, between Carleton Place and Franktown.

Highway No. 33

The bituminous penetration pavement between Glenora Ferry and Conway and between Conway and Bath was completed, which gives continuous pavement from Kingston to the Ferry, over a very scenic route.

Highway No. 38

The bituminous penetration pavement and grading was completed between Glenvale and Verona Swamp.

Overhead Bridge — Danforth and Kingston Road.

Highway No. 41

A small amount of grading was done in the vicinity of Erinsville.

St. Lawrence River Road

Work was continued on this dual highway between Brockville and Gananoque, and was about 75% completed.

The new 1000 Islands International Bridge between Ivy Lea and Collin's Landing, N. Y., was completed and opened for traffic in August, and, in connection with this work, the Department built 4,000 feet of Class "B" road across Hill Island as well as the Customs Plaza at the International Boundary and the approaches at the Canadian Mainland.

In addition to General Maintenance the entire division, except Wolfe Island was kept open for winter traffic. During the summer ten miles of road were surface treated and one hundred and fifty-one (151) miles treated with Dust Layer.

DIVISION NO. 9 — OTTAWA

Highway No. 17

A mulch surface was placed on the diversion in the village of Rockland.

Concrete pavement was laid from Chute-a-Blondeau to Point Fortune, a distance of four and one-half miles.

Highway No. 29

Several sections of bituminous penetration were constructed by day labor to replace portions of the highway which had broken up under frost action.

Highway No. 31

The Morrisburg Subway was completed, including sodding of banks and approaches and erection of guard rail and the laying of unfinished sections of pavement.

North and south of Vernon the two diversions were completed and considerable grading done on the old road. The two bridges over branches of the Castor River were completed.

Highway No. 34

Considerable grading was done between Vankleek Hill and McCrimmon and the shouldering completed between Alexandria and McCrimmon.

Grading was completed on the secondary road between Calabogie and Lanark Road in Darling Township, also the mining road between Calabogie and Black Donald Mine was graded.

During the winter all the roads on the division were kept open. Fifteen miles of stone and bituminous roads were surface treated.

Division No. 10 — Bancroft

Highway No. 28

Grading was completed from two miles west of Hubble's to Moseley Creek, a distance of 2.8 miles; crushed gravel was applied from Paudash Lake to Moseley Creek and this section opened to traffic.

Highway No. 38

Grading was completed from 1.8 miles north of Peters Crossing to Bolton Creek, a distance of 2.2 miles.

Church Street Bridge, looking east — Middle Road.

Keewatin Channel Bridge.

Highway No. 41

Grading was completed from two and one-half miles south of Eganville for a distance of 2.8 miles and north from Dacre 1.3 miles. Between Griffith and Khartum three miles of grading were completed and put into service. The grading was completed between North Brook and Cloyne and 3.5 miles of new road opened to traffic.

Highway No. 60

Grading on three sections of highway between Whitney and Madawaska were completed and five miles of new road opened to traffic. Six miles of gravel mulch was laid west of Golden Lake.

Highway No. 62

Grading operations were completed between Millbridge and Jan's Corners. Beaver Creek Bridge was built.

North of Bancroft between Maynooth and Cumbermere three miles of new grading eliminated a narrow and dangerous portion of the old road. A concrete arch was completed over Papineau Creek.

On secondary roads in this division a good deal of grading was done by Department forces.

Bituminous dust layer or calcium chloride was applied to all gravel roads not under construction. Three hundred miles of highway were kept open for winter traffic.

Division No. 11 — Huntsville

Highway No. 11

A revision at Beaver Creek, approximately half a mile, was completed and a mulch surface laid. The southerly entrance to Bracebridge was regraded, eliminating a dangerous curve. Considerable grading was carried out between Huntsville and Bracebridge. The swing bridge across Muskoka River, at Huntsville, was completed and opened to traffic on July 1st.

Highway No. 35

Crushed gravel was laid between Carnarvon and south boundary of Haliburton.

Highway No. 60

Construction on two concrete decked bridges in Algonquin Park was started.

Highway No. 69

Revision between Bala and Glen Orchard was completed. The grading operations underway between Glen Orchard and Footes Bay were completed and work opened up on an additional 2 miles.

Secondary Roads

Eighteen miles of mulch surface were laid from Bracebridge to about 2 miles east of Baysville.

The mulch surface was continued from the Beaumaris turn to Port Carling.

Grading operations were carried on between Kinmount and Wilberforce and also from Haliburton village east to Loon Lake.

Seventy-three miles of highway were kept plowed for winter traffic.

Division No. 12 — Parry Sound

Highway No. 11

Four and one-half miles of grading were completed between South River and Trout Creek.

The grading of the rock cut south of Powassan was completed and mulched.

Eleven miles of retread between Sundridge and Burk's Falls was surface treated with trap rock chips.

The Burk's Falls bridge was completed and opened for traffic.

Highway No. 69

Seventy per cent of the grading north from Hayes Corner 7.35 miles was completed.

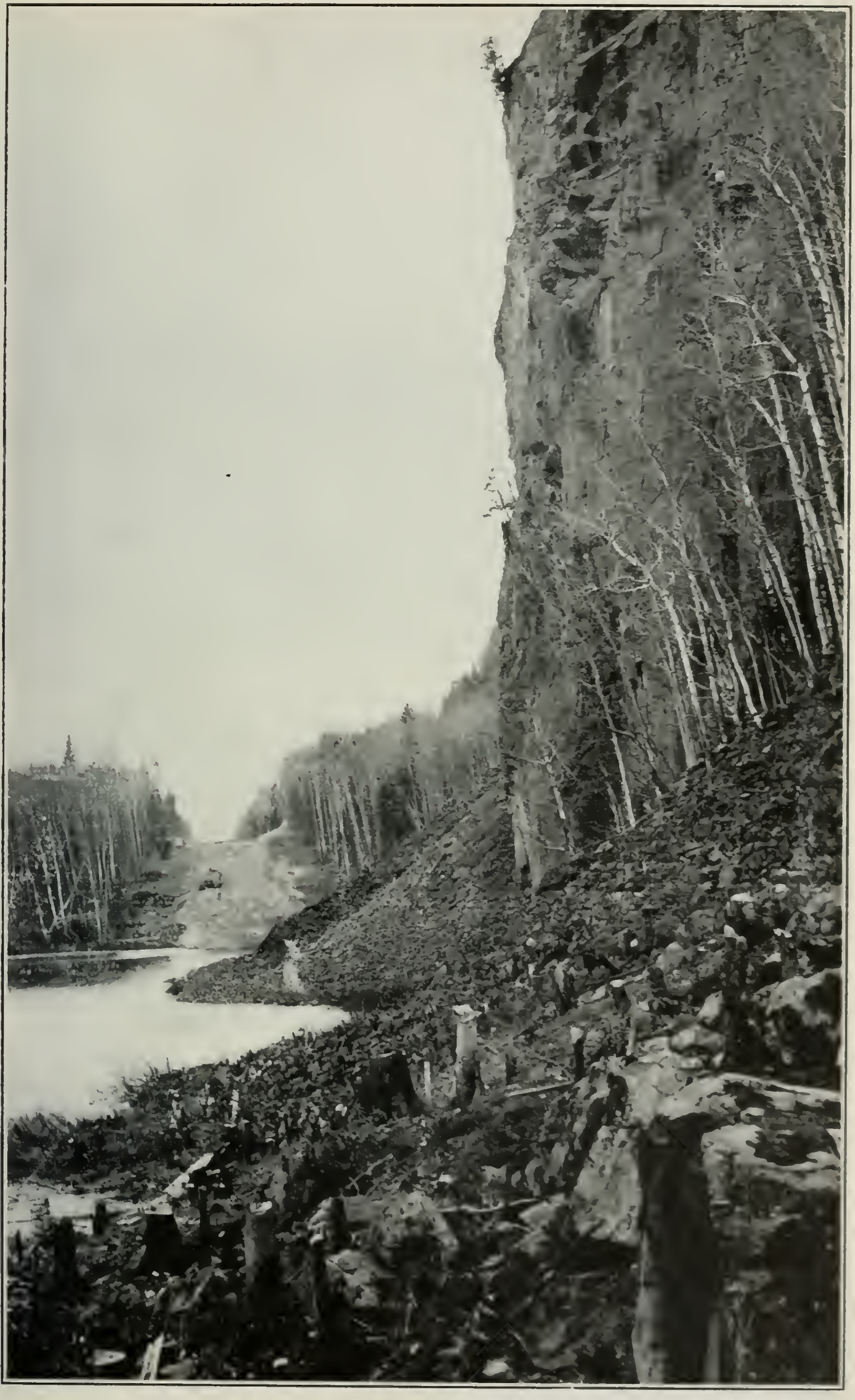
The grading between Parry Sound and Nobel was completed and mulched.

The grading was completed between Pointe au Baril and the Nainscoot River.

During the winter, in order to relieve unemployment, certain work was performed under a Federal-Provincial Agreement. This work carried on in January, February and March, consisting only of clearing and rock cut, was done in the vicinity of Britt and on revision eliminating four level crossings between Hayes Corner and Footes' Bay.

Crushed gravel was placed on secondary roads, Trout Creek-Loring Road and Hayes Corner to Rosseau Road.

All important highways were kept open for winter traffic.



NORTH OF NIPIGON

DIVISION NO. 13 — NORTH BAY

Highway No. 11

The balance of the grading amounting to between 3 and 4 miles and the trimming from North Bay to 27.6 miles was completed.

A rigid frame span over Duchesnay Creek was widened to 40 feet.

Winter work was carried on under a Federal-Provincial Agreement and clearing was completed from 27.6 miles north of North Bay to Nipissing north boundary 11.2 miles and considerable rock excavation was carried out on the south 6 miles.

Highway No. 17

Considerable crushed gravel was placed on the highway between Chalk River and Mattawa.

A reinforced concrete bridge, known as Commanda Overhead, with a 30-foot roadway 267½ feet in length, was constructed over the C. N. R. main line about ¾ of a mile west of North Bay and the approaches partially completed.

The balance of the grading between Hagar and Warren was completed.

Work was done on rock cuts west of Duchesnay Creek Diversion and also between Verner and Sturgeon Falls.

Highway No. 63

About 5.7 miles of grading were completed between Feronia and Zero, eliminating two level crossings. A concrete deck was placed on the Temiskaming Dam over the Ottawa River.

Highway No. 64

Field subway — 30 feet wide under the C. N. R. with approaches was completed and opened for traffic.

Construction was started on the Sturgeon Falls-Field diversion.

Highway No. 94

Gravel mulch was laid from Dafoe Hospital to Highway No. 17, a distance of 3.6 miles.

Considerable work was carried out on secondary roads throughout the division.

Four hundred and nineteen miles of road were kept open for winter traffic.

DIVISION NO. 14 — NEW LISKEARD

Highway No. 11

Grading was completed from 4 miles south of Timagami to Latchford and the clearing from Temiskaming District south limits to 4 miles south of Timagami with considerable rock work was carried out under the Federal-Provincial Agreement.

About 9 miles of mixed macadam was laid between New Liskeard and Englehart and the balance of the tiling and subgrade work was completed with the exception of the overhead at Earlton.

North of Englehart 13 miles was rough graded and the structures completed. The 6-mile grading contract in the vicinity of Dane was completed, and the clearing on Round Lake-Kenogami diversion with the bulk of the rock work completed.

Surveys were carried out between Latchford and New Liskeard and some clearing done immediately north of Latchford.

Looking north toward Latchford, Highway No. 11.

A considerable amount of crushed gravel was placed on highway through the division, 157 miles of King's Highway were treated with a dust palliative.

All the King's Highways in the division were kept open for winter traffic and the secondary roads when possible.

Division No. 15 — Matheson

Highway No. 11

Commencing at the southern boundary of the division about 5 miles south of the Swastika to Kirkland Lake Road grading operations were carried out during the winter months and were about 80% completed at the end of the year.

A bridge over the Kenogami River was completed early in the year and a large rock cut approaching the bridge was taken out.

The clearing and some rock work was done between Ramore and Matheson under the Federal-Provincial Agreement.

Highway No. 66

Crushed gravel was spread from Kirkland Lake to the Quebec Boundary.

Grading on the new Highway No. 66 was under way during the winter as far as the entrance to Kirkland Lake.

Highway No. 67

Concrete pavement was laid from South Porcupine to the T. & N. O. Railway crossing just east of Schumacher where an overhead was under construction, the foundations of this bridge being completed late in the season. Concrete pavement was laid between Schumacher and Timmins and a concrete sidewalk between the two towns.

From Porquis Junction to Iroquois Falls the highway was rebuilt to a good grade line and the subgrade materially improved.

Matheson-Shillington-Pamour Mine Road

This road is now fit for traffic from Matheson to Night Hawk Centre. This road will when completed be the main road from No. 11 to Timmins.

Work was carried out on 7 mining road projects during the year.

All King's Highways were kept open for traffic during the winter except Highway No. 11 north of Porquis Junction.

DIVISION NO. 16 — COCHRANE

Highway No. 11

Ground Hog River Bridge centre pier was completed and all the steel erected and 85% of the grading done.

The approaches to the Mattawishquia River Bridge were completed.

Lost River Bridge was completed as far as the erection of the steel superstructure. Mattice culvert was completed but the grading on both approaches is still to be done.

Crushed gravel was placed on the road between Cochrane and Hearst.

Under Federal-Provincial Agreement considerable clearing was done west of Hearst.

Some crushed gravel was placed on secondary roads and some grading carried out.

Rock cut, north of James Lake — Highway No. 11.

Division No. 17 — Sudbury

Highway No. 17

Grading was completed at the eastern entrance to Sudbury. Grading was also practically completed from Coniston to the proposed overhead over the C. P. Railway about 1½ miles east, in this section a 30-foot rigid frame concrete bridge was built over Coniston Creek. During the winter between Sudbury and Coniston a number of culverts were replaced with concrete structures and some rock excavation carried out.

From the C. P. Railway to Wanapitei several large rock cuts were taken out during the winter. The road was graded from Wanapitei to just west of Markstay. A single strip of concrete pavement was laid from Wanapitei village to the level crossing at Stinson, a distance of 3½ miles.

Winter grading was carried out under the Federal-Provincial Agreement from the proposed overhead west of Markstay to Hagar Village.

A forty-foot rigid frame concrete bridge was constructed west of Markstay.

Considerable work was done on Secondary roads, including reshaping and regravelling 15 miles on the Levack Road and gravelling the new Falconbridge road.

During the winter, all principal roads which warranted same were kept open for traffic.

Division No. 18 — Blind River

Highway No. 17

Grading was completed from Webbwood to a point ten miles east. Three miles of grading were completed west of Serpent River and also from 3 miles east of Algoma to Blind River. Grading and culverts were completed from Iron Bridge to Thessalon. On the section between Bruce Mines and Portlock about 5 miles was finished. Some grading was done on the Echo Bay diversion and also on the Chippewa River diversion.

A lot of heavy grading was done between Mamainse and Montreal River north of Sault Ste. Marie.

Seven miles of concrete pavement were laid east and west from Spanish. A mile of single strip concrete west of Blind River completed the concrete west for 4 miles.

From 3 miles south of Echo Bay 4 miles of concrete pavement were laid southerly.

Grading operations consisting of rock work were carried out under the Federal-Provincial Agreement, during the winter, at Walford, between Cutler and Serpent River, west of Blind River, west of Thessalon, west of Desbarats, at Island Lake and north of Alona Bay.

The Serpent River Bridge was lengthened by the addition of a 30-foot span, piling and steel work were erected for the new bridge at Echo Bay and a 100-foot concrete arch was erected at Chippewa River.

Highway No. 68

A half-mile section south of Espanola was graded by Department forces.

The road was surfaced with crushed gravel, from Espanola to White Fish Falls.

FROG RAPIDS BRIDGE—SIOUX LOOKOUT.

On Manitoulin Island road improvements were made at South Baymouth, Mindemoya and west of Little Current and some sections had crushed gravel applied.

Some work was done on secondary roads and also on mining road projects, the principal one being from Wawa to Helen Mine.

Five hundred and ninety-eight miles of highway were kept open for winter traffic.

DIVISION NO. 19 — FORT WILLIAM

Highway No. 17

A 60-foot rigid frame concrete arch bridge was built over the Big Firesteel River. Ten miles of gravel mulch were laid between Loon and Nipigon.

Highway No. 17A

Six miles of mixed macadam were laid west from Port Arthur on the Dawson Road.

Highway North of Nipigon

Work on the section between Nipigon and Beardmore was started in the fall and grading operations were carried on all winter under a Federal-Provincial Agreement. Grading was also carried on between Beardmore and Bankfield and some clearing was done between Geraldton and Longlac.

Shebandowan Road

Grading operations were carried out on this road during the regular construction season and through the winter, under Federal-Provincial Agreement.

Mining Roads

Mining roads were built and improved between Beardmore and Sand River; Nezah and Sturgeon River; Bankfield and Kenwell; Little Longlac and Hardrock; and from Schreiber to North Shore Mines.

A development road was built from Armstrong to Waygaming Airport.

All the heavily travelled roads on the division were kept open for winter traffic.

North of Nipigon.

Curve and Stop Hill on Old Road —south of Herridge Lake, Highway No. 11.

DIVISION NO. 20 — KENORA

Highway No. 17

Mixed macadam with 1″ asphaltic concrete top was laid from Dog Farm to Manitoba boundary and also from Kenora to Longbow Corners about thirty miles in all. One mile of the same type was laid on the connecting link through Keewatin.

Keewatin Channel bridge between Kenora and Keewatin was completed as was also Cameron Bay bridge.

Wainwright Falls bridge over the Wabigoon River near Dryden was completed with the exception of the concrete deck and approaches.

Small sections of grading completed the grading between Dyment and Vermilion Bay and this portion was surfaced with gravel.

Highway No. 70

Six miles of mixed macadam were laid south from the intersection with No. 17 at Longbow Corners.

Nine miles of new road were completed and opened for traffic between Blindfold Lake and Gibi Lake, also seven miles between Nestor Falls and Muskie were 80% completed.

Highway No. 72

Grading was done on eight miles of new road and two miles of regrading was carried out. Frog Rapids bridge was completed.

Mining Roads

Work was done on several mining projects. Gold Rock Portage road, Gold Pines-Jackson Manion-Argosy Mine, Red Lake-Madsen Mine Road, Berens River Mine. Also a road was built into Kenora Airport.

All King's Highways were kept open as much as possible during the winter.

DIVISION NO. 21 — FORT FRANCES

Highway No. 70

Grading operations were carried out on 12 miles of highway south from Nestor Falls, some of this work being done under the Federal-Provincial Agreement during the winter. A 60-foot span concrete bridge was erected over Log River.

Highway No. 70A

This road was gravelled for its entire length.

Highway No. 71

Between Fort Frances and Devlin 13 miles of mixed macadam were laid and most of the shouldering completed. A concrete bridge was built across the LaVallee River. Crushed gravel was placed on the road between Emo and Rainy River.

Considerable work was done on secondary roads.

All King's Highways and main secondary roads were kept open for winter traffic.

1938

REPORT UPON THE WORK OF THE MUNICIPAL BRANCH FOR THE YEAR 1938

J. A. P. Marshall, Chief Engineer of Municipal Roads

The Municipal Roads Branch, which administers the subsidies on county and township road work, was called upon in 1938 to incorporate under The Highway Improvement Act, all the northern townships which previously received aid through the Northern Development Act. Whereas in 1937 we dealt with 60 per cent. of the organized townships in the province, that is 344 out of 571, in 1938 an additional 215 townships were brought under The Highway Improvement Act. This is an increase in one year from 60 per cent. to 90 per cent. of the total. Only 12 of the organized townships in the whole of Ontario were without provincial aid to road building in 1938, and it is confidently expected that the majority of these 12 will be taking this aid for 1939.

When one realizes the various adjustments necessary in the northern townships due to the amalgamation of the two Departments, we feel satisfied that these townships, situated as they are and with their individual problems, will make a splendid contribution to the improvement of municipal roads.

During the year, work carried by these additional organized townships was placed under the District Municipal Engineers in the various counties in central and eastern Ontario, and in addition District Municipal Engineers were placed at North Bay for the Districts of Nipissing and Sudbury, and also at New Liskeard for the Districts of Temiskaming and South Cochrane, while the work north and west in North Cochrane, Algoma, Manitoulin, Sault Ste. Marie ,Port Arthur, Fort William, Rainy River and Kenora was supervised by the Division Engineers.

County Roads

Since the passing of The Highway Improvement Act in 1901 and to the end of 1938 a total of $139,516,798.43 has been expended on construction and maintenance of county roads, of which the Province has contributed $65,997,907.51. This includes the county expenditure during 1938, on which the provincial subsidy was paid in 1939.

At the end of 1938 the Province was paying subsidies to the counties on 8,145.2 miles of county roads — approximately 15 per cent. of the total road mileage in the area covered by the County Road System.

Expenditure on county roads in 1938 was as follows:

	Total Expenditure	Provincial Subsidy
Construction: —		
County Roads	$ 2,437,473.71	$ 1,218,610.88
Maintenance: —		
County Roads	$ 2,248,859.67	$ 1,124,360.77
Total Expenditure	$ 4,686,333.38	$ 2,342,971.65

Construction Work

The work on which the above expenditure for construction was made included the following:

Gravel or Stone	186.0	Miles
Surface-Treated Gravel or Stone	53.0	"
Low-Cost Bituminous Surfaces	120.0	"
Mixed Macadam and Asphaltic Concrete	20.0	"
Cement Concrete	1.5	"
Total	380.5	"
Bridges Over 10-Foot Span	46	
Steel Arch and Concrete Culverts	73	
Pipe and Tile Culverts	1581	

A detailed list of the important work undertaken by the various counties and townships is found further in this report grouped in districts.

Maintenance Work

Bituminous Surface Treatment	473.6	Miles
Dust Prevention Treatment (oil)	129.6	"
Dust Prevention Treatment (calcium)	1185.7	"
Clay-Gravel Stabilization (calcium)	198.4	"
Gravel and Crushed Stone Resurfacing: —		
(a) Pitrun Gravel Applied	238,304	Cu. Yds.
(b) Crushed Gravel Applied	421,511	"
(c) Crushed Stone Applied	146,519	"
Snow Removal — Season 1938-1939: —		
(a) Mileage of Road Kept Open with Mechanical Equipment	5,483	Miles
(b) Snow Fence Erected	915	"

County Suburban Roads

The mileage of suburban roads is 752.5 miles. The expenditure at the end of 1938 amounted to $26,664,444.85 of which the cities and separated towns have contributed $7,014,419.96 or five per cent. of the total expenditure made on the County Road System.

In 1938 the expenditure on County Suburban Roads was $959,227.00 of which the Province contributed $479,613.50 and the cities $243,240.01.

EXPENDITURES ON SUBURBAN ROADS — 1938

Name of County	Mileage	Totals	Government Grant 50%
Brant	22.4	31,143.47	15,571.73
Carleton	89.6	137,303.76	68,651.88
Elgin	18.3	8,914.51	4,457.26
Essex	37.5	17,412.61	8,706.31
Frontenac	28.5	21,449.82	10,724.91
Grey	32.4	26,458.35	13,229.17
Kent	9.5	21,571.76	10,785.88
Lambton	14.5	10,382.44	5,191.22
Leeds and Grenville, Smith's Falls	5.1	11,768.76	5,884.38
Brockville	6.3	7,794.50	3,897.25
Lincoln	12.3	3,697.43	1,848.71
Middlesex	41.0	31,370.30	15,685.15
Ontario	13.5	11,037.06	5,518.53
Oxford	4.0	3,023.00	1,511.50
Perth	7.5	5,534.82	2,767.41
Peterboro	58.3	39,909.60	19,954.80
Waterloo Kitchener	9.2	14,085.41	7,042.71
Galt	6.0	14,165.55	7,082.77
Welland Niagara Falls	9.9	6,358.23	3,179.12
Welland	6.5	7,003.01	3,501.50
Wellington	23.5	9,217.24	4,608.62
Wentworth	55.5	74,234.05	37,117.03
York	241.2	445,391.32	222,695.66
Totals	752.5	959,227.00	479,613.50

DISTRICT NO. 1 — *Counties of Essex, Kent and Lambton.*

Essex — 3.8 miles 3″ plant-mixed mulch was laid on County Road No. 8 south of Essex, 5.5 miles graded to standard and gravelled on County Roads Nos. 7 and 8, four concrete bridges were built, and 25 corrugated pipe culverts were installed. Ten miles was treated with oil, and 32 miles treated with calcium chloride to eliminate dust. Five concrete bridges were extended, and 19,888 cubic yards pit-run gravel was applied to county and suburban roads. The entire system was kept free from snow by mechanical equipment.

Kent — 15.0 miles was graded and gravelled and 24.5 miles 3″ plant-mixed mulch was laid. Six miles was given bituminous surface-treatment, and 1.5 miles 20-foot concrete pavement was built on Suburban Road No. 14 south of Chatham. One 20-foot span concrete bridge was built south of Wheatley and 21 corrugated-pipe culverts installed throughout the system, 24,000 cubic yards crushed gravel or stone was applied, and one mile treated with calcium chloride.

Lambton — 3.5 miles was graded to standard and 33 pipe culverts installed. 2.6 miles 3″ road mixed mulch was laid on Suburban Road No. 4 south-east of Sarnia. A new floor was laid on the steel bridge west of Florence. 6.5 miles was treated with calcium chloride. 6,725 tons crushed stone and 9,450 cubic yards pit-run gravel was applied.

DISTRICT NO. 2 — *Counties of Elgin, Middlesex, Norfolk and Oxford.*

Elgin — A ribbed rigid-frame concrete bridge was constructed on County Road No. 14, together with the diversion of Talbot Creek and the grading and re-alignment of ¾ miles of roadway. The Ackert Bridge on County Road No. 51 in North Dorchester Township was replaced with a rigid-frame structure and the necessary grading and stream diversion completed. Crushed stone surfacing was applied on the Spring Creek Hill diversion and the road opened for traffic. A concrete retaining wall and culvert extension were constructed on the Aldborough-Dunwich townline.

One-half mile of crushed stone retread pavement was laid by the St. Thomas Suburban Commission on the Fingal Road No. 16.

Calcium chloride and oil were used as dust layers on 70 miles of gravel road. General maintenance work was carried out on 210 miles of gravel roads.

Middlesex — Four new steel and concrete bridges were constructed on County Roads Nos. 11, 16 (2) and 23. Extensive repairs and rip-rapping were made on the Guest Bridge, London Township, and a bridge on the Caradoc-Lobo townline. Culverts were constructed on County Roads Nos. 19 and 39 (2). Grading was carried out on a total of 10 miles, including 1.2 miles of newly opened right-of-way in East Williams Township. One mile of double surface-treatment pavement was laid in the Town of Strathroy, County Road No. 2. Dust-laying treatment was given on a total of 10 miles.

On the London Suburban Commission Roads, three steel and concrete bridges were erected on Road No. 23 and one on Road No. 36. A stone penetration pavement was laid on 1.75 miles of centre strip on the Springbank Drive, Road No. 14.

Norfolk — Grading was completed on 5 miles of County Road No. 1, including extension of a steel and concrete bridge. New pavements totalling 9.55 miles were constructed as follows: Double surface-treatment, Road No. 7, 2.2 miles; Road No. 9, 2.05 miles; Road No. 14, 2.85 miles; mulch, Road No. 33, 0.7 miles; Road No. 9, 1.05 miles; sand stabilization with tar, 0.7 miles.

Oxford — Three new steel and concrete bridges were constructed on County Road No. 6 in the Village of Embro. A new steel and concrete bridge was built on County Road No. 18 in the Village of Norwich. Bridges on County Road No. 10 in the Township of Dereham and County Road No. 14 in the Township of North Norwich were extended with steel and concrete decks. Culvert extensions were made on County Road No. 28, West Zorra, and County Road No. 19 in Dereham. A total of 9.8 miles of grading with crushed gravel surface was constructed on County Roads 3, 12, 13, 14, 19 and 28. One-half mile grading and crushed-gravel surface were constructed on the Woodstock Suburban Area Road No. 12. A total of 83 miles of gravel road was given a dust-laying treatment with oil or calcium chloride.

DISTRICT NO. 3 — *Huron, Perth, Waterloo and Wellington.*

Huron — Construction: Approximately 16 miles of asphalt mulch top was put down on a good gravel base. This work turned out exceedingly well, and the cost was low. One concrete bridge was built and three small culverts. Two creosoted wooden pipes were put in, and also 38 metal culverts. One Diesel-powered tandem-drive power maintainer was purchased and also a pump and spray which was mounted on a county truck with tank for chemical weed-killing.

Maintenance: Roads were gravelled where necessary, and approximately 160 miles of road were treated with calcium chloride. Weeds were destroyed by the use of chemicals over approximately 180 miles of road.

Perth — Construction: Double surface-treatment was put on road surfaces which were ready for it — 12 miles. Retread was laid on 2¼ miles of prepared base. Eleven metal pipes were installed. Grading was completed on 7.5 miles of road, and the same gravelled.

Maintenance: Road surfaces were maintained by power maintainer and drags. Eleven miles of roads in different sections were treated with calcium chloride.

Waterloo — Construction: Three miles of road were graded and gravelled and brought to proper cross-section and grade. One bridge and 5 culverts were constructed and 36 metal pipes installed. One Diesel-powered road-maintainer was purchased, also one four-wheel-driven truck (5 ton) with snow plow.

Maintenance: All roads which were not treated with bitumen were treated with calcium chloride, and the surfaces patrolled regularly by trucks with blades and power maintainer.

Wellington — Construction: Approximately 20 miles of road were graded to proper cross-section and grade, and surfaced with gravel. Six culverts were constructed, and 32 metal pipes were installed. One power maintainer was purchased.

Maintenance: Roads were resurfaced where necessary and well maintained with the use of power maintainer. Approximately 150 miles of road were treated with calcium chloride for the purpose of dust-laying and building up the base.

District No. 4 — *Brant, Haldimand, Lincoln, Welland and Wentworth.*

Brant — The County of Brant constructed approximately one mile of hot-mix bituminous pavement. The main portion of this consisted of a new entrance to the city. This was a decided improvement in the county's system and the Suburban Area Commission are to be commended. They also constructed 1.25 miles of gravel mulch, and graded and gravelled approximately 6 miles of road.

Haldimand — The County of Haldimand constructed two bridges, one of which consisted of two 26-foot skew spans with a 24-foot roadway. It was of the flat-arch type with cantilever wings. They also constructed 5 culverts and surface-treated 20 miles of road, one mile of which was done for the first time. Approximately 21 miles of stone stabilization was constructed by the County and 2½ miles of heavy grading was done with their new equipment consisting of a tractor and carry-all.

Lincoln — The County constructed 8½ miles of penetration, all on old roadbeds which had been surface-treated previously. They also resurface-treated approximately 40 miles of macadam road. They built one bridge, a 40-foot span with 24-foot roadway, over Mill Creek. The bridge was a flat-arch type. Three culverts were also constructed.

Welland — One bridge and one culvert was constructed by the County and 1.9 miles of bituminous pavement was laid, either on water-bound macadam or old roadbeds; 23 miles of re-surface treatment was done in the County. Also a small amount of grading.

Wentworth — Four culverts were built in the County, 5½ miles of retread and 1.3 miles of penetration, the majority of which was reconstruction of old roads which had failed. The County Roads in this District were maintained to a high standard and the County Engineers should be commended on the class of work which they have carried out during the past season.

District No. 5 — *Counties of Bruce, Dufferin and Grey.*

Bruce — Construction: Approximately 6 miles of retread was completed on the Elora Road between Walkerton and Paisley, completing the road between these centres. Between Paisley and Southampton, on the same road, grading and hill-cutting was done in preparation for continuing paving in 1939. It is expected that the road will be completed into Southampton by the end of 1940 at the latest. Slightly over a mile of retread pavement was constructed at Tara, and about 7/10 of a mile east of Southampton of plant-mix retread. A 40-foot reinforced concrete arch was built by contract south of Ripley, and one concrete culvert extended. The Patanella Bridge in Albemarle township on the road into Red Bay was replaced by 2 six-foot wood stave pipes, and a considerable fill made here and the approaches widened.

New equipment purchased included wings for the county snow plow, one hydraulically controlled, one yard scraper, one electric drill and a screen bin and belt conveyor for one of the crushing outfits. One new power maintainer was also purchased. A building was purchased in the Town of Walkerton in which to store and repair county equipment at a price of $1,300.00 for the land and building. A new roof and other extensive repairs will run the ultimate cost of the building to approximately $5,000.00.

Maintenance: This consisted of the usual crushed gravel resurfacing and surface treatment of considerable of the mileage of retread already constructed. Approximately 100 miles of gravel road were treated with calcium chloride as a dust preventive. Chemical weed-killer was used on the roadsides on quite a mileage of road with varying results.

Dufferin — The chief items of construction in this county consisted of the grading and widening of approximately 2 miles on Road No. 4 in East Garafraxa Township, east of Belwood. A 40-foot reinforced concrete rigid-frame type bridge with 22′ clear roadway was built on Road No. 10 in Mono Township. One and one-quarter miles of bituminous surface treatment was done at Laurel and Grand Valley. New machinery purchases consisted of a windrow-eliminator attached to their power grader. Most of the gravel crushed for maintenance this year was crushed to pass a three-quarter-inch screen, making an ideal product for resurfacing.

Grey — Construction: Suburban Area — Construction in the suburban area in 1938 was confined to grading and hill-cutting on the Kilsyth Road out to the Bruce County line. New equipment purchased consisted of a pick-up truck for the use of the foreman. One concrete culvert was constructed.

Maintenance consisted of the usual gravel maintenance and the application of calcium chloride as a dust preventative.

Construction on the county system consisted of the laying of about 1¼ miles of retread west of Meaford, and grading on Road No. 14, St. Vincent, from the end of the pavement to the new Storey Bridge on the 9th line of St. Vincent. The Storey Bridge over the Big Head River, consisting of a steel-truss span approximately 175 feet in length on concrete abutment, was built on Road No. 14 on the 9th line of St. Vincent. Two smaller reinforced concrete structures were also constructed on the same road.

DISTRICT NO. 6 — *Counties of Halton, Peel, Ontario, Simcoe and York.*

Halton — Carrying out its annual paving programme established in 1937, the County of Halton constructed 4.17 miles of bituminous gravel mulch pavement; 3.3 miles on Road No. 7, Milton westerly, and 0.87 miles on Road No. 1 from Campbellville southerly.

On account of the low interest rates prevailing, the county has adopted the policy of issuing five-year debentures for the purpose of financing its paving programme.

Four-foot cold-mix bituminous shoulders were constructed on Road No. 2 in concession 1 north of Dundas Street and concession 1 south of Dundas Street in order to provide a wider travelling surface than the existing 10-foot concrete pavement. In all, 1.6 miles of this work was done.

A total of 4 miles of road was graded to standard width and surfaced with crushed gravel.

A 30-foot span reinforced concrete rigid frame bridge was constructed on Road No. 8 in concession 6, Township of Trafalgar.

Maintenance work consisted of the application of approximately 11,000 yards of crushed gravel and routine dragging of the roads with power equipment. Most of the crushed gravel used is produced by a county-owned crushing plant at a very reasonable cost. All roads were kept open for traffic during the winter months by means of snow plows and trucks.

Ontario — A total of 5.25 miles of bituminous retread was constructed: 1.25 miles on Oshawa Suburban Road No. 2, 1.6 miles of Roads 17 and 24 extending southeasterly from Beaverton Village; 1.3 miles on Road Nos. 1, 2 and 3, south of Claremont, 0.6 miles on Road No. 16, Brock Township, and 0.5 miles on Road No. 10, Scott Township, in the hamlets of Leaskdale and Udora. A total of 6.91 miles of road was graded to standard width and 6 miles surfaced with crushed gravel.

Maintenance work consisted of the application of about 8000 yards of crushed stone and gravel, 1¼ miles of bituminous surface treatment and 14 miles of clay gravel stabilization, also 6 miles of dust-prevention treatmentwith calcium chloride, together with routine dragging of the roads with power and horse-drawn equipment. Practically all of the crushed stone and gravel used is produced by a county-owned crushing plant at a very reasonable cost. All the roads were kept open for traffic during the winter months with snow plows and trucks.

Peel — Only a very limited programme of construction work was undertaken, a total of 2.92 miles being graded to standard width and surfaced with crushed gravel. A creosoted timber bridge 24-foot span was constructed over Cold Creek on the York-Peel County boundary opposite Lot 10, Albion Township.

Maintenance work consisted of the application of 10,127 cubic yards of crushed gravel, 6.5 miles of bituminous surface-treatment, 60 miles of dust-prevention treatment with calcium chloride, and 5 miles with oil. The roads were kept open as far as possible during the winter months with snow plows and trucks.

Simcoe — A total of 7.8 miles of road was graded to standard width and surfaced with crushed gravel, the principal items being 1.75 miles of Road No. 4 in Flos Township, 2 miles of Road No. 7 in Nottawasaga Township and 2¼ miles on Road No. 11 in Oro Township. One reinforced concrete bridge 20′ span and 30′ roadway was constructed on Road No. 23 in Medonte Township. The county purchased a rubber-tired tractor and a multiple-blade drag to form a power unit for maintenance work, and a 60-horsepower Diesel caterpillar tractor and a leaning-wheel grader to form a power unit for construction grading. This equipment was put to good use during the year.

Maintenance work consisted of the application of about 27,000 cubic yards of crushed gravel, the work being let by public tender; 0.6 miles of bituminous surface-treatment; 7.5 miles of clay-gravel stabilization; 37 miles of dust-prevention treatment with calcium chloride and 3.5 miles with oil. Thirty-six miles of road were kept open for traffic during the winter months by means of snow plows and trucks.

York — The main construction projects carried out were as follows: 2.66 miles bituminous penetration surface on Road No. 8 from Buttonville to Victoria Square; 1.04 miles bituminous penetration surface on Road No. 8 from O'Connor Drive northerly; 2.18 miles of bituminous gravel-mulch on Road No. 21 from the Sutton Line to the Ontario County boundary via Pefferlaw; and 4 miles grading and gravelling on Road No. 23 from Mount Albert Road northerly. A 50′ span 30′ roadway rigid frame concrete bridge was constructed on Road No. 20, Scarlett Road over Black Creek, eliminating a very dangerous condition caused by the old narrow bridge at this point.

Maintenance work consisted of the application of approximately 13,000 cubic yards of crushed gravel, 48½ miles of bituminous surface-treatment, 25 miles of dust-prevention treatment with calcium chloride and 5 miles with oil. All roads were kept open for traffic during the winter months with snow plows and trucks.

DISTRICT NO. 7 — *Counties Northumberland and Durham, Peterborough and Victoria.*

Northumberland and Durham — Five miles of road were constructed in the counties: one and one-quarter in Brighton Township, and three and three-quarters in Seymour Township. Two concrete slab culverts were built in Brighton Township. The sum of $1800.00 was expended on 32 steel pipe culverts.

About 11¼ miles were surface-treated, 7¼ miles being the Trenton-Wooler Road, and 4 miles being the road leading from Highway No. 28 to the Village of Millbrook. Also, for the first time on county roads, calcium chloride was used for consolidation, and so impressed was the Road Commission by the results obtained in Victoria County, that 38 miles were treated. Generally speaking, this has been the most progressive step the counties have taken in years, and it has been received very favourably in all the municipalities through which this work was carried out.

During the year the counties added to their equipment by the purchase of one three-ton, and one four-ton truck, also two snow plows for these units.

Peterborough — Some very excellent construction work was carried out at various locations, totalling about 4½ miles. The most important of these being south of Warsaw on the Warsaw-Norwood Road. In this work, grades were cut and sharp curves reduced. In the Village of Havelock, four-tenths of a mile of asphalt gravel mulch was laid to complete the work commenced last year; 15 pipe culverts were installed. Besides the routine maintenance, 26 miles of road were treated with calcium chloride as a dust-layer, and $3,200.00 was spent in resurfacing with gravel the Lakefield-Buckhorn Road.

A 50-horsepower maintainer was added to the equipment, and snow plow for this unit was purchased from Northumberland and Durham Counties. A concrete mixer was also purchased.

Suburban Area — 5½ miles were graded, 3.4 of which were surfaced. The most important section of this work was west of Douro Village, where the old road was relocated; 2.3 miles of asphalt gravel mulch was laid.

2.1 miles of asphalt mulch roads were surface-treated; 36 miles of gravel was dust-laid with calcium chloride.

Victoria — During the year a total of 6½ miles were graded and surfaced with gravel in various short lengths throughout the county. North of Oakwood, one mile of tar retread was built, as was one mile of the same type on the Bobcaygeon-Fenelon Falls road, just west of Bobcaygeon; 24 miles were consolidated by the use of calcium chloride.

Forty-five miles of road previously consolidated were given a second application of calcium chloride; 2.7 miles were surface-treated with tar. Other maintenance work was purely routine.

The County purchased a new power maintainer of the Diesel type.

DISTRICT NO. 8 — *Counties of Hastings and Prince Edward.*

Hastings — During the year 1938 a change in County Road Superintendents took place and, after the new man became acquainted with the county system, very good results were obtained. The chief construction work was the laying of 0.8 miles of retread and widening 0.4 miles of 12-foot pavement, laid some years ago, to 18 feet; also surface-treating 4 miles and regrading existing roads to bring them up to standard.

General maintenance over the whole system was carried out. One 14-foot concrete culvert was repaired with new end-walls and one 12-foot wood culvert replaced with a metal arch. Guide-rail and signs were erected at dangerous points, 25,829 cu. yds. of resurfacing placed on roads and 55 miles calcium chloride and 20 miles oil dust-prevention used; 150 miles of road were kept open during winter months.

Prince Edward — During the season of 1938, work in this County has been carried out very efficiently and results of work have been of a high standard. The construction programme consisted of the following: Grading, 4.2 miles; pipe culverts installed (a) across road, 7 (b) private entrances, 18; gravel on new grade, 2.2 miles; retread 1.7 miles; gravel mulch 1.4 miles.

General maintenance was carried out on all roads and 4,000 cu. yds. gravel and stone was used in resurfacing; 9.0 miles were treated with oil and 5.0 miles with calcium for dust-prevention; 19.1 miles waterbound macadam was surface-treated and 5.0 miles stabilized with calcium chloride. Seven miles of snow fence was erected and 160 miles of road kept open during the winter months. One truck and one snow plow were purchased during this period.

DISTRICT NO. 9 — *Counties of Frontenac, Lennox and Addington, Leeds and Grenville.*

Frontenac — 2½ miles of road were graded and 5 miles surfaced with pre-mix asphalt and stone. A new pull grader and a jackhammer drill were purchased.

Maintenance: All roads were kept in good travel condition; 6 miles were treated with calcium chloride; 5 miles of snow fence were erected.

Lennox and Addington — The railway-crossing at Napanee was improved; 1½ miles were taken over, widened, fenced and graded in S. Fredericksburgh Township; 12 miles of grading were improved.

Maintenance: All county roads were properly maintained; 62 miles were treated with calcium chloride. A shaper was purchased and used to shape the calcium chloride-treated roads.

Leeds and Grenville — The construction included 6 miles of new grading, 6¾ miles of machine-mixed retread and 5¾ miles of gravel mulch.

Maintenance: A new motor grader was purchased which helped considerably in keeping the gravel roads passable. All roads were kept in good travel condition.

DISTRICT NO. 10 — *Counties of Carleton, Lanark and Renfrew.*

Carleton — The County continued their policy of widening existing grades and removal or improvement of sharp curves. The mileage of bituminous surfacing was increased.

The Ottawa Suburban Road Commission also carried on their work of widening and improving their grades and also a surfacing programme. The Commission were able to get all land required for the completion of the widening of the Richmond Road through the Village of Westboro, and 1939 should see the important piece of work finally completed.

In the whole system under the two authorities 7½ miles of road were graded, 11 miles surfaced with bituminous materials, 26 surfaced with gravel and over 2 miles of existing hard surface widened to give a width of 20 feet.

Maintenance on both systems was well kept up.

Lanark — A construction programme was again carried on in the county, 2½ miles of road were graded and surfaced, 1 mile with bituminous binder and the other 1½ miles with gravel. Numerous small jobs were undertaken to improve points of bad visibility or sharp curves. Two bridges were erected, 1 steel beam and concrete of 45-foot span and 1 of creosoted lumber of 30-foot span. The Ferry Road, bituminous surface, was widened for a distance of 1 mile and this portion now has an 18-foot surface.

Maintenance was attended to and the county truck was last winter under contract to the Highway Department for snow plowing and also did a certain amount of plowing on the county system.

Renfrew — Construction was resumed this year and work undertaken in three townships; 5½ miles of road were graded and gravelled and, in the Village of Westmeath, a deep open ditch was replaced by a large tile drain and the roadway widened to the maximum width obtainable without property damage. One section of grading about 8/10 of a mile was extremely heavy, being nearly all rock work. Two new dump trucks were purchased to replace two that had been in use for about 10 years.

Maintenance was well done and the use of calcium for stabilizing gravel surfaces was extended about 20 miles.

DISTRICT NO. 11 — *Counties of Prescott and Russell, Stormont, Dundas and Glengarry.*

Prescott and Russell — Two Warren steel-truss spans 81 feet and 89 feet with a 40-foot addition replaced the bridge washed out over the Castor River on County Road No. 5 which is the boundary between Russell and Cambridge townships. These were raised 3 feet and have a clear roadway of 16 feet. The abutments and piers are reinforced concrete. The Lemieux Bridge, an overhead steel-truss with a span of 203 feet was built over the Nation River to replace the one destroyed by the spring flood. The roadway is 16 feet clear and the abutments are reinforced concrete.

Six miles of county road were graded and gravelled. All the bituminous surfaces in the county system required a great deal of patching.

Stormont, Dundas and Glengarry — About 40 miles of road were gravelled under the heading "Resurfacing" in various spots over the system. Many culverts were repaired by replacing some of the broken links of pipe and some of the pipe culverts were also extended in length; 8 pipe and tile culverts were installed; 15 miles of retread pavement were laid.

Township Roads

The townships operating under The Highway Improvement Act during the year progressed favourably in the improvement of township roads. Many permanent structures, bridges and culverts were built. Improvement in alignment and grading was undertaken. A number of the townships purchased power graders, and a considerable improvement in the standard of surface maintained in these townships was noted. An increased mileage was treated with dust preventative and also stabilized.

A number of townships, principally in Western Ontario, purchased weed-spraying machines and a real effort made in defence against the weed menace. Snow-clearing equipment was purchased in other townships.

Many townships undertook a programme of low-cost roads, and a great improvement was noted here.

Expenditure on township roads in 1938 was as follows:

	Total Expenditure	Provincial Subsidy
Construction: —		
Township Roads	$ 1,578,955.62	$ 827,188.62
Maintenance: —		
Township Roads	$ 3,212,126.73	$ 1,707,554.52
Total Expenditure	$ 4,791,083.35	$ 2,534,743.14

Construction Work

The work on which the above expenditure for construction was made included the following:

Gravel or Stone	353.89	Miles
Surface-Treated Gravel or Stone	7.06	"
Low-Cost Bituminous Surfaces	4.28	"
Mixed Macadam and Asphaltic Concrete	5.78	"
Cement Concrete	0.34	"
Total	371.35	"
Bridges Over 10-Foot Span	114	
Pipe and Tile Culverts	2370	
Other Culverts	733	

Maintenance Work

Bituminous Surface Treatment	70.86	Miles
Dust Prevention Treatment (oil)	252.30	"
Dust Prevention Treatment (calcium)	330.80	"
Clay-Gravel Stabilization (calcium)	49.40	"
Gravel and Crushed Stone Resurfacing: —		
(a) Pitrun Gravel Applied	1,035,921	Cu. Yds.
(b) Crushed Gravel Applied	884,586	"
(c) Crushed Stone Applied	288,053	"
Snow Removal — Season 1938-1939: —		
(a) Mileage of Road Kept Open with Mechanical Equipment	2,975	Miles
(b) Snow Fence Erected	231	"

A detailed list of the important work undertaken by the townships follows:

District No. 1 — *Townships in the Counties of Essex, Kent and Lambton.*

Essex — 5 miles tiling and 12.6 miles grading; 14 pipe culverts; 2 concrete culverts and 7 concrete bridges, is a summary of their construction work. Maintenance required 45,300 cubic yards gravel or stone, and 8 miles was treated with calcium chloride.

Kent — A summary shows 5 miles of tiling; 25.3 miles graded to standard; 148 pipe culverts installed. One concrete culvert and 3 concrete bridges constructed, 3.5 miles treated with calcium, and 85,400 cubic yards crushed stone or gravel was applied to the roads.

Lambton — 5 miles tiling, 49 miles grading, and 90 pipe culverts installed. Two concrete culverts and 3 concrete bridges were built; 4.5 miles treated with calcium chloride; 19,793 cubic yards crushed stone and 39,789 cubic yards gravel was applied.

District No. 2 — *Townships in the Counties of Elgin, Middlesex, Norfolk and Oxford.*

Elgin — Bridges over 10 feet in span were constructed by the following townships: Southwold, Malahide. Retaining wall along Kettle Creek built by the Township of Southwold.

Chemical weed killer employed by the Townships of Dunwich, Southwold and Yarmouth.

Middlesex — Bridges over 10 feet in span were constructed by the Townships of Mosa, Ekfrid, London (2), McGillivray.

General maintenance of gravel roads was carried out. Liquid calcium first used by the Townships of London and Westminster as a dust-layer. Chemical weed killers used in the Townships of London, Westminster and Dorchester North.

Snowplow equipment purchased by the Townships of London, Westminster and W. Nissouri.

Norfolk — Three concrete culverts constructed by the Township of Townsend. Improvements were made on Long Point Park Road, S. Walsingham Township.

Snowplow equipment now in use in all townships in the county. Increase in tobacco acreage is making maintenance work very difficult on sand and gravel roads.

Oxford — Bridges over 10 feet in span were constructed by the following townships: West Zorra and Blenheim. The Township of Dereham laid 1.2 miles of gravel-mulch pavement.

Snowplow equipment now in use by the townships of W. Oxford, E. Oxford, Dereham, N. Norwich, S. Norwich, E. Nissouri and E. Zorra.

District No. 3 — *Townships in the Counties of Huron, Perth, Waterloo and Wellington.*

Huron — The townships in Huron County constructed 9 concrete culverts, 1 concrete bridge, and put in 47 corrugated metal pipes and 1 metal arch; 104,840 cubic yards of gravel were used in construction and maintenance of the roads, and 3.6 miles dust-laid.

Perth — Townships in Perty County constructed 6 concrete culverts, 1 metal arch, and installed 19 metal pipes. Approximately 69,546 cubic yards of gravel were used on construction and maintenance.

Waterloo — The townships in Waterloo County constructed 3 concrete culverts, 2 concrete bridges, 1 metal arch, and installed 30 metal culverts, 3 wooden (creosoted) pipes. They used 47,333 cubic yards of gravel for construction and maintenance of roads and dust-laid 9 miles.

Wellington — Townships in Wellington County constructed 5 concrete culverts, 1 metal arch and installed 52 metal pipes and 1 metal arch. Approximately 73,200 cubic yards of crushed gravel were used on construction and maintenance.

DISTRICT NO. 4 — *Counties of Brant, Haldimand, Lincoln, Welland and Wentworth.*

The townships in this district constructed 6 bridges and 5 culverts; approximately 45 miles of gravel was placed on new grades and 14 miles of road was graded; 1.3 miles of bituminous pavement was constructed on macadam base; 5.2 miles of road was surface-treated for the first time, and over 50 miles was re-surface treated. The work of the township was a credit to the superintendent and they should be commended.

DISTRICT NO. 5 — *Counties of Bruce, Dufferin and Grey.*

Construction work in all the townships was kept to a minimum in an endeavor to curtail expenditure at the request of the Department, and consisted chiefly of urgent bridge and culvert construction with short stretches of grading and hill-cutting being undertaken in some of the townships. Approximately 4 miles of new grade was constructed and 11 miles of grade reconstructed, as well as considerable grade reduction. There was the following bridge and culvert construction: Bridges 10-foot span and over 17; culverts 24; pipes installed 99.

The townships of Elderslie, Huron and Proton purchased power maintainers during the year.

DISTRICT NO. 6 — *Townships in the Counties of Halton, Ontario, Peel, Simcoe and York.*

A total of about 60 miles of construction grading was done and surfaced with gravel. Six concrete bridges were constructed and 15 concrete culverts. In the township of North York 0.34 miles of concrete pavement and ½ mile of black base was constructed as a local improvement. In the Township of East York 2½ miles of surface-treated stone pavement was constructed.

A total of approximately 230 miles were treated with dust-preventative, both oil and calcium chloride being used. About 19 miles were stabilized, using calcium chloride and salt. Eight townships in District No. 6 purchased power graders during the year, and a considerable improvement in the standard of surface maintained in these townships was noted.

DISTRICT NO. 7 — *Townships in the Counties of Northumberland and Durham, Peterborough, and Victoria.*

Northumberland and Durham — With the general reduction in appropriations the work was confined in most townships to routine maintenance of dragging, and resurfacing. There were two exceptions to this, the Townships of Murray and Darlington, where for the first time in the county, these townships undertook to consolidate about a mile of road each by the use of calcium chloride. Darlington Township, besides building a bridge of 18-foot span concrete with steel beams, also constructed about one-half mile of new road which was made necessary by erosion and under-cutting of the old one by the Long Sault Creek. Other concrete bridges were built, one each in the Townships of Percy, Brighton and Haldimand. Permission was given the Townships of Hope and Cramahe to build timber bridges of squared material.

Peterborough — There was no work of special mention in the townships, other than that undertaken by North Monaghan, in laying 1½ miles of asphalt mulch on township streets.

Four townships, previously operating under the Colonization Roads Act, adopted methods outlined in The Highway Improvement Act.

Victoria — In construction work the Townships of Fenelon and Verulam were most active, and built three and a half miles of new road. The former were most active with construction work, and built two and one-tenth miles of new road and surfaced same, besides completing a hill-cutting job on the 5th concession at a cost of $850.00. Verulam built and surfaced 1¼ miles of new road. Eldon improved a large mileage by removing heavy shoulders that had accumulated over a period of years. Several swamps were brushed out also. A great deal of attention was given the township of Ops by arrangement with the council, and through closer co-operation practical results were noted in many locations. Engineering assistance was given the township in carrying out a contract for the removal of an overhead bridge, and replacing the same with a fill. Six townships previously operating under the Colonization Roads Act adopted methods outlined in The Highway Improvement Act.

DISTRICT NO. 8 — *Townships in the Counties of Hastings and Prince Edward.*

Hastings — With the Colonization townships, with one exception, carrying on work under The Highway Improvement Act a noticeable change in work was noticed over that accomplished in former years under Statute Labour. Maintenance work was carried out very satisfactorily in all townships.

Prince Edward — Work in the townships of Prince Edward consisted mostly of general maintenance and repair, most township roads in the county showing an improvement over the previous years.

DISTRICT NO. 9 — *Townships in the Counties of Frontenac, Lennox and Addington and Leeds and Grenville.*

Frontenac — The work in the townships was chiefly routine maintenance. Three trucks and two snowplows were purchased as an aid to maintenance.

Lennox and Addington — All township roads were kept maintained in excellent shape.

Leeds and Grenville — Two and three-quarter miles of machine mixed asphalt retread were built and three new concrete culverts constructed.

DISTRICT NO. 10 — *Townships in the Counties of Carleton, Lanark and Renfrew.*

Carleton — Maintenance was the chief activity in the townships but North Gower built a bridge of about 40-foot span and this finishes the bridge programme in that township. Gloucester Township purchased a Diesel power grader. This machine was extensively and successfully used in construction and maintenance work, both in the township and other municipalities. The Township of Nepean purchased a crusher and Osgoode a steel span of 45 feet, second hand, which was erected on timber cribs to supply the needs of a lightly used section of road. Fitzroy Township had to cofferdam the central pier of a two-span bridge, and deepen the foundation which had been undermined and allowed the pier to settle about 9 inches at one end. The township superintendent successfully undertook the work and next year the bridge will be jacked up and the pier levelled on top.

Lanark — The township activities were confined practically to maintenance work which was well attended to. Construction, where undertaken, was mostly removing rock obstructions to view on small sections of grading. The three townships of Darling, Lavant and Pakenham, formerly under Statute Labour, this year came under The Highway Improvement Act and this county is now operating 100 per cent under The Highway Improvement Act.

Renfrew — In this county there are now only three townships not operating under The Highway Improvement Act, twenty townships having come into the system this year. The work has been mainly maintenance and some small pieces of road widening and improvement. The quality of the work has been good and the local authorities have co-operated well in trying to make the new system of road work a success. The largest item of construction was a large reinforced concrete culvert with a heavy fill and realignment of road in Alice Township.

DISTRICT NO. 11 — *Townships in the Counties of Prescott and Russell and Stormont, Dundas and Glengarry.*

Apart from the customary maintenance, which was well done, only the following items need be mentioned: Brown Bridge was built in Matilda Township on Lot 15, Concession VIII. This is an overhead steel-truss structure on reinforced concrete abutments. The span is 80 feet and the roadway is 16 feet clear. The Township of Winchester began a programme of replacing several wooden culverts and bridges. During 1938, three reinforced concrete culverts with 20 feet clear roadway were built, two of 18 feet and one of 10 feet. A reinforced concrete skew culvert, known as the McMillan Bridge, was built on Concession IV, Lot 22, Township of Finch. This has a span of 10 feet and a 22-foot clear roadway.

DISTRICT NO. 12 — *Townships in the Provisional County of Haliburton and District of Muskoka.*

Haliburton — Considerable ditching and road widening was carried out by all townships this year. Dysart Municipality purchased a new 3-ton truck. This has been to the advantage of all townships in this municipality. The truck was used for dragging, gravelling and snow plowing operations. Many sharp curves and bad hills were eliminated in the county. Maintenance work was efficiently carried out over the entire county. All bridges and culverts were kept in good repair, no new bridges were built this year. There is a growing demand, each year, for snow plowing and keeping more roads open in all townships.

Muskoka — Two miles of road was graded, ditched and gravel-mulch surfaced on Port Sandfield Road, Medora Township. Muskoka Township purchased a truck, equipped with snow plow. The dragging of all roads in this township were done by the truck and a big improvement in the surface condition of the roads was seen and appreciated. Many sharp curves and bad hills in the District were eliminated. Maintenance work was efficiently carried out over the entire Muskoka District. This being the first year of operation under The Highway Improvement Act, it was late in the season before all forms were approved and considerable reorganizing work was necessary. This has resulted in satisfaction to all. All bridges and culverts were kept in good repair. No new bridges were built this year.

DISTRICT NO. 13 — *Parry Sound District.*

Nineteen hundred and thirty-eight road construction was very small, due to increased maintenance costs caused by heavy floods. However, approximately 5.5 miles of new road were constructed. A new 30-foot concrete approach was constructed to a 90-foot steel span at Lot 21, Concession XIII, Township of Himsworth South, also two new wooden approaches were constructed to the Ryerson Swing Bridge, one approach being 32 feet long and the other 34 feet long. B. C. fir was used for stringers. An extensive programme of maintenance and resurfacing was carried out in all townships.

DISTRICT NO. 14 — *Townships in Nipissing and Most of Sudbury.*

The most outstanding advance during the past year was the purchase of power graders by three townships. Two of these graders are also used for snow plowing. No new bridges were built. Six bridges were reconstructed and one bridge replaced by a 60″ creosoted woodstave pipe; 393 culverts were repaired, replaced or newly constructed; 2.58 miles of new road were built; 1.39 miles of grading have been reported, but this figure is low, as considerable grading was carried out under maintenance which should have been reported as construction.

DISTRICT NO. 15 — *Townships in Temiskaming and part of Cochrane (South).*

Temiskaming — Maintenance and repair of existing road systems was the main activity of all the organized townships in this District for 1938, their first year of operations under The Highway Improvement Act. Some 30,000 cu. yds. of gravel were placed on the roads. Eight miles of road were stabilized with clay-mine mill sand, crushed stone and calcium chloride. Eighteen miles of road were treated with calcium chloride dust-layer. New construction was limited to minor revisions of alignment and grade in 4 townships. One small concrete bridge was completed and substructure started for two others. About 3 miles of snow fence was erected and 70 miles of road were kept open with snow plows.

South Cochrane — Three of the four organized townships in this district operated under The Highway Improvement Act in 1938 — maintenance being the main activity; 8,000 cu. yds. of gravel and 10,000 cu. yds. crushed stone were placed on the roads. About 2 miles of bituminous surface-treatment and 30 miles of oil dust-layer were applied. One township's activities were confined to the construction of about ¾ of a mile of new road under a Northern Development Agreement.

DISTRICT NO. 16 — *Part of Cochrane (North).*

The townships of Fauquier and Glackmeyer passed the necessary by-laws for receiving aid under The Highway Improvement Act.

Maintenance work was carried out under The Highway Improvement Act in this first year.

DISTRICT NO. 18 — *Algoma, Manitoulin and part of Sudbury.*

The township of Tarentorus on the Rankin location excavated 26,643 cu. yds. of earth at a depth of 4 to 7 feet for drainage. The township of Baldwin built 2 timber bridges of 2 spans of 14 feet each. The township of St. Joseph built 1 concrete culvert, 6 x 8 ft.

Other than the above, the work carried out by the townships, which were operating for the first year under The Highway Improvement Act, was chiefly routine maintenance, gravelling, dragging, roadside maintenance and ditching. Also many culverts or small bridges were repaired or replaced during the season.

District No. 19 — *Townships in the District of Thunder Bay.*

6.35 miles of new grading was done and 21.85 miles of existing roads were regraded; 17,030 cu. yds. of earth excavation was done in ditching and grading; 3,771 cu. yds. of gravel was placed on newly graded roads; 85 cu. yds. of rock was used for rip-rapping; 62 timber, 5 metal and 5 concrete culverts under 10 feet and 6 timber bridges over 10-foot span were constructed. Four miles of clay surfacing was done.

One new truck with hydraulic dump-box and snow plow was purchased by Neebing Township and 2 new horse-drawn snow plows were purchased by Paipoonge Township.

Maintenance work was principally side brushing, weed cutting, ditching, repairing or replacing of 220 small culverts, and repairing 6 timber bridges over 10-foot span. All roads were dragged periodically and 28,390 cu. yds. of gravel was used for resurfacing and patching; 27.75 miles of grading repairs were done. Calcium chloride was used as a dust preventive on 4.50 miles of road; 59.83 miles of snow fence was erected and 410 miles of road was kept open for winter traffic.

District No. 20 — *Kenora.*

Work done on various roads within the Township of Ignace: Ditching, 3,000 lineal feet; resurfacing with 5,250 cu. yds. of cinders.

Work done on various roads within the Townships of Jaffray and Melick: Clearing 1.5 acres; ditching 780 lineal feet; grading new road 1.38 miles; grading existing roads 1.08 miles; pipe culvert, wood 1, other culverts, wood 12; stumping and grubbing 2.25 acres; road surfaces, gravel on new grade, 1.46 miles.

Maintenance: Ditching 2,660 lineal feet; resurfacing with 1,405 cu. yds. of pit-run gravel.

Townships of Temple, Sanford, Langton and the west half of Aubrey, comprising the Municipality of Machin: Clearing 3.0 acres; stumping and grubbing 2.5 acres; ditching 4,000 lineal feet; grading new road .33 miles; culverts, wood, 4.

Maintenance: Ditching 2,300 lineal feet; resurfacing clay applied, 1,600 cu. yds.; pit-run gravel applied, 2,200 cu. yds.

District No. 21 — *Rainy River.*

Alberton — Work in this municipality was largely maintenance; 2,500 yards of pit-run gravel was put on and 5 miles of side brushing done; ½ mile of muskeg ditch dug.

Atwood — One pile trestle 45 feet long and 6 timber culverts were built; ½ mile of muskeg dug and 3½ miles of new clearing.

Blue — Approximately 3000 ft. of new road constructed; 3 miles of muskeg ditch dug and 750 yards of pit-run gravel distributed.

Chapple — Two pile trestle bridges 45 and 60 feet long were built and 7 wooden culverts installed; 38 wooden culverts were repaired, 5,500 cubic yards of pit-run gravel distributed and 3 miles of muskeg ditch dug.

Dilke — One mile of new road built and 1.5 miles of side brushing done; ½ mile of muskeg ditch was dug and 500 yards of pit-run gravel was distributed.

Emo — 41 timber culverts repaired; 850 yards of clay placed on muskeg roads and 7,600 yards of pit-run gravel was applied; 18 miles of roadside were brushed and calcium chloride dust-layer placed on 2 miles of road.

LaVallee — 46 wooden culverts repaired; 1,200 cu. yds. of clay fill placed on muskeg roads and 2,400 cubic yards of pit-run gravel distributed; 4,900 lineal feet of ditching and 6.6 miles of side brushing was done.

Morley — 4 metal pipe culverts installed and ½ mile of new road graded and gravelled; 11 wooden culverts repaired; 21 miles of side brushing was done; 3 miles of ditch cleaned and redug and 3,100 yards of pit-run gravel placed.

Morson — Maintenance consisting of small amount of gravel placed and occasional dragging of roads. Clearing and grubbing was done on 1.5 miles of road, sufficient to make a passable trail.

McCrosson and Tovell — Gravel placed on 2.2 miles of new grade. Side brushing on 3.5 miles of road and 1 mile of muskeg ditch cleaned; 12 wooden culverts repaired and 1000 yards pit-run gravel placed.

McIrvine — 12 concrete pipe culverts installed. Side brush cut on 9.5 miles of road; 1,200 lineal feet of ditching done and 1,000 yards of pit-run gravel placed.

Worthington — Gravel placed on 1.5 miles of new grade, using 1,100 yards of gravel; ½ mile of muskeg ditching done and 1.5 miles of side brushing.

Extensive forest fires throughout the district during October did considerable damage to roads across muskegs, necessitating throughout the district extensive repairs in the rebuilding of shoulders and cleaning out of ditches on approximately 25 miles of road.

ROAD CONFERENCES

A change in the meeting place was made for the 1938 conference and more commodious quarters were secured at the Royal York Hotel, Toronto. The Twenty-Fourth Annual Conference was held there on February 21st and 22nd. The actual registration of township road superintendents was 215 and of county superintendents 32. In addition to these, however, a great number of reeves, councillors and other persons interested in roads attended all sessions of the conference.

Invitations to the Twenty-Fifth Annual Conference, which was held in the Royal York Hotel on February 20th and 21st, 1939, were sent to every organized county and township in the province. Due to the fact that the northern townships had no previous experience of the conference, and also to the long distances to be travelled to reach Toronto, only a dozen new superintendents and as many more township officials from the north were present. The conference was, however, the largest and most successful to date, the register showing 40 county road superintendents and engineers, 228 township road superintendents, and 109 municipal officials.

In 1938 three District Conferences were held. District No. 1, comprising the Counties of Essex, Kent and Lambton, gathered together on March 15th and 16th in Chatham for their Ninth Annual Conference. District No. 2, covering the Counties of Middlesex, Elgin, Norfolk and Oxford, met on March 10th and 11th in London for their Eleventh Annual Conference. District No. 3 initiated a conference in 1938 and carried it through with great success. The Counties of Huron, Perth, Waterloo and Wellington were represented, and the meeting took place in Kitchener on March 30th and 31st.

In 1939 it was found possible to hold only two district conferences. The Tenth Annual Conference for District No. 1 was held at Chatham on March 14th, 1939, and embraced the Counties of Essex, Kent and Lambton. District No. 2, covering the Counties of Middlesex, Elgin, Norfolk and Oxford, met at London for their Twelfth Annual Conference on March 15th and 16th, 1939. These smaller gatherings are very valuable supplements to the larger one and the friendly exchange of experiences in these districts thus made possible are believed by this Branch to be of great practical benefit to all those participating.

INDIAN RESERVES

Rama Indian Reserve took aid under The Highway improvement Act for the first time in 1938, thus raising the total of Reserves so operating to fourteen. The total expended on Reserve roads was $33,488.34, and the government subsidy $17,928.18.

Indian Reserce	Expenditure
Alnwick	(return held)
Cape Croker	$ 3,813.48
Caradoc	2,183.47
Kettle and Stony Point	833.46
Moravian	650.00
Mud Lake	262.85
New Credit	337.67
Rama	400.00
Rice Lake	287.80
Sarnia	1,191.35
Saugeen	837.95
Six Nations	18,050.85
Tyendinaga	3,000.00
Walpole Island	1,639.46
	$ 33,488.34

CONCLUSION

The county engineers and superintendents of the various counties and suburban commissions, along with the township road superintendents, are making a great contribution to the improvement of municipal roads throughout Ontario, and this Department acknowledges with appreciation their kindly co-operation.

BRIDGES UNDERTAKEN BY THE HIGHWAYS DEPARTMENT AND COMPLETED DURING THE YEAR 1938

During the year 84 bridges were completed by the Department. Fifty-three of these structures are in Northern Ontario and the remainder in the south. The total amounted in all to 10,950 lineal feet of bridge. The larger and more important structures are mentioned in detail as follows:

Blue Water Bridge: This is more familiarly known as the Sarnia-Port Huron Bridge. The Department constructed the Ontario approach consisting of a series of truss and girder spans with a total length of 2,840 feet.

Keewatin Channel: This bridge is on Highway No. 17 immediately west of Kenora. It consists of a 325.5 foot steel arch span; three concrete arches of 90 foot span each; two of 48 foot span; one of 77 feet; one concrete beam span of 48 feet and one of 30 feet.

Kingston Road Underpass: This is a 61 foot reinforced concrete rigid frame span carrying one lane of the new Danforth Avenue dual highway over one lane of Kingston Road.

Kleinburg Bridges: Three bridges were built over the Humber River near Kleinburg on the new Brown's Line Highway. Each bridge consists of two 65 foot concrete girder spans with 25 foot cantilevers at each end. In this way abutments and wing walls were eliminated.

Sioux Lookout Bridge: This is a new steel bridge replacing an old timber structure over Frog Rapids at Sioux Lookout. The new bridge consists of two truss spans of 132 feet each and two approach spans of 45 and 30 feet each.

Tweed Bridge: This is on Highway No. 37. The new bridge consisting three steel spans of 101 feet each on a sharp skew over the Moira River replaced two old spans of 104 feet and eliminated two 90 degree turns at the bridge approaches.

Unionville Bridge: This is a double 40 foot span rigid frame structure replacing a 70 foot bow-string arch structure built in 1916. The new bridge has a 40 foot roadway and eliminates the crooked alignment to the approaches of the old bridge.

A complete list of all structures completed appears on Appendix No. .

ARTHUR SEDGWICK,
Chief Bridge Engineer.

APPENDICES

Nos. 1 to 12

APPENDIX No. 1

GROSS EXPENDITURES BY COUNTIES AND DISTRICTS

April 1, 1938, to March 31, 1939

County	Construction	Maintenance	Total
BRANT: —			
Highway No. 2	$ 996.13	$ 14,195.90	$ 15,192.03
“ No. 5	491.30	3,184.63	3,675.93
“ No. 5B	207.65	2,425.76	2,633.41
“ No. 24	1,278.10	6,670.08	7,948.18
“ No. 24A	15,769.98	1,631.75	17,401.73
“ No. 53	89,557.74	9,206.67	98,764.41
“ No. 54	1,378.84	8,393.99	9,772.83
Blue Lake Road	115.10	681.30	796.40
Keg Lane	676.53	1,316.49	1,993.02
	$ 110,471.37	$ 47,706.57	$ 158,177.94
BRUCE: —			
Highway No. 4	$ 2,804.04	$ 12,937.87	$ 15,741.91
“ No. 6	4,467.21	46,370.57	50,837.78
“ No. 9	88.38	8,283.41	8,371.79
“ No. 21	431,243.45	22,612.08	453,855.53
“ No. 86	4,020.38	3,898.52	7,918.90
	$ 442,623.46	$ 94,102.45	$ 536,725.91
CARLETON: —			
Highway No. 15	$ 372.30	$ 9,347.41	$ 9,719.71
“ No. 16	939.42	10,185.49	11,124.91
“ No. 17	1,807.79	19,396.23	21,204.02
“ No. 29	570.07	2,062.54	2,632.61
“ No. 31	102,824.53	17,860.62	120,685.15
“ No. 44	2,211.63	12,944.93	15,156.56
	$ 108,725.74	$ 71,797.22	$ 180,522.96
DUFFERIN: —			
Highway No. 9	$ 2,790.00	$ 9,153.61	$ 11,943.61
“ No. 10	712.85	13,700.44	14,413.29
“ No. 24	3,195.93	13,756.61	16,952 54
“ No. 89	86.10	4,355.61	4,441.71
	$ 6,784.88	$ 40,966.27	$ 47,751.15
ELGIN: —			
Highway No. 3	$ 58,740.59	$ 17,221.35	$ 75,961.94
“ No. 4	298,553.43	4,410.82	302,964.25
“ No. 19	65,419.01	3,692.71	69,111.72
“ No. 73	129,802.51	4,796.81	134,599.32
“ No. 74	16,932.21	4,577.91	21,510.12
“ No. 75	191.07	637.00	828.07
“ No. 76	138.75	700.00	838.75
“ No. 77	210.48	735.00	945.48
	$ 569,988.05	$ 36,771.60	$ 606,759.65
ESSEX: —			
Highway No. 2	$ 84,871.42	$ 7,087.17	$ 91,958.59
“ No. 2A	1,299.52	7,590.40	8,889.92
“ No. 3	190,884.19	13,260.40	204,144.59
“ No. 3B	196.80	2,039.76	2,236.56
“ No. 18	9,290.75	11,980.38	21,271.13
“ No. 18A	7,544.40	14,041.16	21,585.56
“ No. 18B	330.65	822.42	1,153.07
“ No. 39	6,261.16	7,163.12	13,424.28
Pelee Island	1,121.93	743.81	1,865.74
	$ 301,800.82	$ 64,728.62	$ 366,529.44

District	Construction	Maintenance	Total
FRONTENAC: —			
Highway No. 2	$ 2,078.13	$ 11,691.88	$ 13,770.01
" No. 7	18,679.43	12,242.94	30,922.37
" No. 15	3.55	9,692.67	9,696.22
" No. 33	5,123.58	2,381.41	7,504.99
" No. 38	260,944.56	18,754.16	279,698.72
" No. 95	1,465.92	2,063.94	3,529.86
" No. 96	4,072.76	4,490.36	8,563.12
Preliminary Engineering	1,604.67	....	1,604.67
Road into Fort Henry	4,529.07	303.02	4,832.09
Fort Henry	180,993.82	....	180,993.82
Secondary Roads —			
Howe Island	4,240.69	....	4,240.69
B 11, Meyer's Cave — Ardoch-Lavant	3,017.78	1,430.83	4,448.61
B 12, Ardoch-Coxville	23.26	....	23.26
	$ 486,777.22	$ 63,051.21	$ 549,828.43
GREY: —			
Highway No. 4	$ 84,437.80	$ 18,202.07	$ 102,639.87
" No. 6	4,938.53	26,631.49	31,570.02
" No. 10	231,788.14	19,029.79	250,817.93
" No. 21	67,184.91	6,192.99	73,377.90
" No. 26	478.10	15,206.37	15,684.47
	$ 388,827.48	$ 85,262.71	$ 474,090.19
HALDIMAND: —			
Highway No. 3	$ 546.05	$ 27,702.94	$ 28,248.99
" No. 6	9,591.15	9,877.38	19,468.53
" No. 54	5.91	7,513.82	7,519.73
" No. 56	....	3,759.17	3,759.17
	$ 10,143.11	$ 48,853.31	$ 58,996.42
HALTON: —			
Highway No. 2	$ 245.71	$ 7,787.53	$ 8,033.24
" No. 5	43.12	6,830.48	6,873.60
" No. 7	6,768.20	7,142.64	13,910.84
" No. 25	9,074.91	8,540.23	17,615.14
" No. Q	207,535.27	29,564.62	237,099.89
Brant's Park	858.89	1,228.53	2,087.42
Preliminary Survey	920.72	....	920.72
	$ 225,446.82	$ 61,094.03	$ 286,540.85
HASTINGS: —			
Highway No. 2	$ 83,798.76	$ 14,890.11	$ 98,688.87
" No. 7	1,281.95	18,147.76	19,429.71
" No. 14	128,025.04	11,707.44	139,732.48
" No. 28	139,274.19	4,440.08	143,714.27
" No. 33	537.20	2,083.45	2,620.65
" No. 37	31,965.15	18,249.86	50,215.01
" No. 62	293,650.76	36,423.75	330,074.51
Preliminary Survey	3,209.36		3,209.36
Secondary Roads —			
Bancroft-Herman	$ 79.11	$ 161.01	$ 240.12
Maynooth-Madawaska	224.00	492.20	716.20
Hybla-New Carlo-Combermere	154.35	118.51	272.86
Maynooth-Lake St. Peter-Whitney	484.31	450.50	934.81
Bird's Creek-Baptiste Lake		250.48	250.48
	$ 682,684.18	$ 107,415.15	$ 790,099.33

District	Construction	Maintenance	Total
HURON:—			
Highway No. 4	$ 17,691.63	$ 17,758.21	$ 35,449.84
“ No. 8	2,383.97	5,594.18	7,978.15
“ No. 9	4.12	477.02	481.14
“ No. 21	27,984.39	24,681.94	52,666.33
“ No. 23	10,789.89	1,429.28	12,219.17
“ No. 81	60.75	3,827.77	3,888.52
“ No. 83	21,497.12	14,685.19	36,182.31
“ No. 84	1,773.60	8,186.54	9,960.14
“ No. 86	9,574.60	12,747.56	22,322.16
“ No. 87	284.51	10,919.58	11,204.09
	$ 92,044.58	$ 100,307.27	$ 192,351.85
KENT:—			
Highway No. 2	$ 24,154.73	$ 10,769.69	$ 34,924.42
“ No. 3	379.26	11,369.71	11,748.97
“ No. 21	9,860.85	5,805.57	15,666.42
“ No. 40	33,068.51	4,913.45	37,981.96
“ No. 78	1,779.16	2,486.67	4,265.83
“ No. 79	219.03	2,010.41	2,229.44
“ No. 98	8.54	278.27	286.81
	$ 69,470.08	$ 37,633.77	$ 107,103.85
LAMBTON:—			
Highway No. 7	$ 13,236.14	$ 13,513.68	$ 26,749.82
“ No. 21	118,776.67	19,610.14	138,386.81
“ No. 22	48.80	2,340.94	2,389.74
“ No. 40	16,694.27	14,607.87	31,302.14
“ No. 79	14,789.44	12,107.35	26,896.79
“ No. 80	58.61	920.01	978.62
“ No. 82	9,206.77	2,399.23	11,606.00
Birch Creek Diversion	63,492.76	192.56	63,685.32
Sarnia N. Lake Shore Road (Credit)	535.00	....	535.00
Sarnia Point Edward Int'l Bridge	488,017.27	....	488,017.27
	$ 723,785.73	$ 65,691.78	$ 789,477.51
LANARK:—			
Highway No. 7	$ 5,995.11	$ 8,429.75	$ 14,424.86
“ No. 15	23,271.87	10,555.76	33,827.63
“ No. 29	57,038.85	17,432.33	74,471.18
“ No. 44	528.01	843.55	1,371.56
Secondary Roads —			
B 27	2,603.02	2,524.04	5,127.06
B 28	10,661.90	....	10,661.90
	$ 100,098.76	$ 39,785.43	$ 139,884.19
LEEDS AND GRENVILLE:—			
Highway No. 2	$ 60,905.68	$ 24,313.01	$ 85,218.69
“ No. 15	1,824.93	21,733.07	23,558.00
“ No. 16	1,071.25	12,662.78	13,734.03
“ No. 29	1,420.62	10,276.05	11,696.67
“ No. 32	535.34	7,380.68	7,916.02
“ No. 42	2,307.90	19,236.30	21,544.20
St. Lawrence River Road	1,597,630.28	7,468.45	1,605,098.73
Secondary Roads —			
Elgin-Chaffey's Locks	57.43	187.08	244.51
No. 2 to Ivy Lea	267.04	2,439.55	2,706.59
	$ 1,666,020.47	$ 105,696.97	$ 1,771,717.44
LENNOX AND ADDINGTON:—			
Highway No. 2	$ 376.25	$ 5,321.39	$ 5,697.64
“ No. 7	8,063.27	4,079.10	12,142.37
“ No. 33	268,646.37	4,786.22	273,432.59
“ No. 41	157,767.87	52,130.83	189,898.25
	$ 434,853.76	$ 46,317.09	$ 481,170.85

District	Construction	Maintenance	Total
LINCOLN: —			
Highway No. 8	$ 2,677.95	$ 15,472.50	$ 18,150.45
" No. 20	15.84	10,116.01	10,131.85
" No. 57	747.86	3,470.15	4,218.01
" No. 58	509.25	2,018.61	2,527.86
" No. Q	1,171,511.72	559.50	1,172,071.22
	$1,175,462.62	$ 31,636.77	$1,207,099.39
MIDDLESEX: —			
Highway No. 2	$ 27,753.86	$ 28,697.41	$ 56,451.27
" No. 4	654.48	9,362.29	10,016.77
" No. 7	142,283.32	9,942.68	152,226.00
" No. 22	5,711.08	7,536.11	13,247.19
" No. 23	5,238.73	2,354.00	7,592.73
" No. 73	2,241.75	3,861.17	6,102.92
" No. 74	635.62	2,067.25	2,702.87
" No. 80	3,645.41	5,795.50	9,440.91
" No. 81	3,963.74	11,550.75	15,514.49
	$ 192,127.99	$ 81,167.16	$ 273,295.15
NORFOLK: —			
Highway No. 3	1,007.77	7,265.31	8,273.08
" No. 6	413.80	1,973.10	2,386.90
" No. 19	184.80	706.55	891.35
" No. 24	373.50	5,426.96	5,800.46
" No. 53	377.08	756.74	1,133.82
Secondary Roads —			
Long Point Park Road	....	4,347.17	4,347.17
	$ 2,356.95	$ 20,475.83	$ 22,832.78
NORTHUMBERLAND AND DURHAM: —			
Highway No. 2	$ 986.84	$ 42,063.95	$ 43,050.79
" No. 7A	9,255.39	6,445.34	15,700.73
" No. 28	209.74	5,334.42	5,544.16
" No. 30	7,123.22	19,650.60	26,773.82
" No. 33 Credit	23,411.53	1,448.24	Credit 21,963.29
" No. 35	11,743.81	10,070.42	21,814.23
" No. 45	225.19	9,686.30	9,911.49
	$ 6,132.66	$ 94,699.27	$ 100,831.93
ONTARIO: —			
Highway No. 2	$1,055,173.86	$ 19,576.83	$1,074,750.69
" No. 7	3,477.59	5,201.52	8,679.11
" No. 7A	1,542.57	1,074.20	2,616.77
" No. 12	51,962.62	33,103.77	85,066.39
" No. 47	5,118.91	13,441.57	18,560.48
" No. 48	350.93	9,207.81	9,558.74
" No. 69	126.71	7,702.05	7,828.76
	$1,117,753.19	$ 89,307.75	$1,207,060.94
OXFORD: —			
Highway No. 2	$ 3,084.28	$ 13,329.90	$ 16,414.18
" No. 3	3,306.97	866.67	4,173.64
" No. 19	9,813.15	8,220.62	18,033.77
" No. 53	22,376.76	1,051.75	23,428.51
" No. 59	2,438.56	20,680.45	23,119.01
" No. 97	5.55	...	5.55
Woodstock-Thamesford Road	461.43	4,634.78	5,096.21
Princeton North Road	75.45	101.09	176.54
	$ 41,562.15	$ 48,885.26	$ 90,447.41

District	Construction	Maintenance	Total
PEEL: —			
Highway No. 2	$ 1,082.64	$ 5,477.97	$ 6,560.61
" No. 5	708.13	7,819.58	8,527.71
" No. 7	202.79	6,175.96	6,378.75
" No. 9	6,413.55	5,661.21	12,074.76
" No. 10	7,812.26	15,027.98	22,840.24
" No. 50	9,438.26	19,625.53	29,063.79
" No. 51	466.39	822.44	1,288.83
" No. Q	223,481.15	23,148.58	246,629.73
	$ 249,605.17	$ 83,759.25	$ 333,364.42
PERTH: —			
Highway No. 7	$ 43.73	$ 6,598.35	$ 6,642.08
" No. 8	17,357.19	11,972.73	29,329.92
" No. 19	140,953.87	8,968.21	149,922.08
" No. 23	24,914.44	17,063.59	41,978.03
" No. 83	341.90	1,194.65	1,536.55
" No. 86	2,575.90	5,029.93	7,605.83
	$ 186,187.03	$ 50,827.46	$ 237,014.49
PETERBOROUGH: —			
Highway No. 7	$ 36,449.42	$ 22,196.58	$ 58,646.00
" No. 28	20,227.74	26,431.91	46,659.65
" No. 30	176.28	2,072.04	2,248.32
" No. 36	307,357.26	3,529.97	310,887,23
" No. 5	43.60	2,369.19	2,412.79
Secondary Roads —			
Apsley-Haliburton Apsley-Loon Lake Apsley-Chandos	2,132.60	3,871.64	6,004.24
Kinmount-Burnt River	15,297.25	258.08	15,555.33
Bobcaygeon-Burnt River	1,029.79	572.30	1,602.09
Catchacoma-Haliburton	387.09	1,055.66	1,442.75
Mining Roads —			
Canadian Flint and Spar Mine	17,973.76	....	17,973.76
Nepheline Mine	9,123.61	....	9,123.61
	$ 410,198.40	$ 62,357.37	$ 472,555.77
PRESCOTT AND RUSSELL: —			
Highway No. 17	$ 161,051.83	$ 25,074.14	$ 186,125.97
" No. 34	9,621.22	4,529.45	14,150.67
	$ 170,673.05	$ 29,603.59	$ 200,276.64
PRINCE EDWARD: —			
Highway No. 14	$ 453.73	$ 9,748.42	$ 10,202.15
" No. 33	152,948.18	17,487.77	170,435.95
" No. 41	1,132.42	1,476.53	2,608.95
	$ 154,534.33	$ 28,712.72	$ 183,247.05
RENFREW: —			
Highway No. 17	$ 57,273.32	$ 85,083.41	$ 142,356.73
" No. 29	60.30	205.99	266.29
" No. 41	219,530.30	10,556.60	230,086.90
" No. 60	241,557.71	25,461.82	267,019.53
" No. 62	40,760.95	8,001.69	48,762.64
Secondary Roads —			
Pembroke to Alice Twp. Line	$ 1,153.80	$ 5,528.26	$ 6,682.06
Wilno-Rockingham-Brudenell-Killaloe	3,934.62	1,158.84	5,093.46
Eganville-Cromac-Foymount	1,675.16	1,077.84	2,753.00
Killaloe-Ruby-Eganville	....	299.16	299.16
Combermere-Jewellville-Quadeville	223.63	969.85	1,193.48
Maynooth-Madawaska	358.31	787.30	1,145.61
Maynooth-Lake St. Peter-Whitney	786.02	720.44	1,506.46
Dacre-Caldwell-Eganville	....	129.61	129.61
Dacre-Shamrock	33.20	176.97	210.17
Griffith-Black Donald	....	99.02	99.02
Killaloe-Round Lake	113.92	742.46	856.38

County	Construction	Maintenance	Total
Township Roads —			
Combermere-Diamond Lake	520.91	4.80	525.71
Princess Lake Road	437.63	15.40	453.03
Cameron	5.88	....	5.88
Preliminary Engineering	1,604.68	....	1,604.68
	$ 570,030.34	$ 141,019.46	$ 711,049.80
SIMCOE: —			
Highway No. 9	$ 5,154.95	$ 4,548.69	$ 9,703.64
" No. 11	34,083.23	31,504.33	65,587.56
" No. 12	102,125.57	22,581.45	124,707.02
" No. 24	1,191.61	17,001.38	18,192.99
" No. 26	3,315.34	20,871.60	24,186.94
" No. 27	3,840.49	43,438.38	47,278.87
" No. 88	333.75	1,807.53	2,141.28
" No. 89	34,094.87	17,183.29	51,278.16
" No. 90	1,989.18	18,622.45	20,611.63
" No. 91	514.44	4,005.73	4,520.17
" No. 92	55,546.40	8,781.99	64,328.39
" No. 93	5,866.53	12,393.75	18,260.28
Secondary Roads —			
Lawson-Port Severn	....	1,347.98	1,347.98
Lawson-Severn Falls	....	1,831.73	1,831.73
	$ 248,056.36	$ 205,920.28	$ 453,976.64
STORMONT, DUNDAS AND GLENGARRY: —			
Highway No. 2	$ 1,489.07	$ 22,269.93	$ 23,759.00
" No. 34	162,817.79	12,197.24	175,015.03
" No. 31	4,579.51	5,787.33	1,207.82
" No. 43	6,586.55	22,969.10	29,555.65
	$ 166,313.90	$ 63,223.60	$ 229,537.50
VICTORIA: —			
Highway No. 7	$ 14,790.90	$ 7,714.10	$ 22,505.00
" No. 35	185,338.55	17,417.94	202,756.49
" No. 36	11,412.60	6,276.15	17,688.75
" No. 46	4,628.64	22,413.13	27,041.77
Secondary Roads —			
Burnt River-Norland-Kinmount	$ 122,378.05	$ 2,064.91	$ 124,442.96
Bobcaygeon-Burnt River	1,029.78	572.30	1,602.08
Uphill-Sebright-Norland	179.90	9,507.41	9,687.31
	$ 339,758.42	$ 65,965.94	$ 405,724.36
WATERLOO: —			
Highway No. 7	$ 38.73	$ 3,372.47	$ 3,411.20
" No. 8	214,194.18	13,779.12	227,973.30
" No. 24	4,337.24	3,411.36	7,748.60
" No. 24A	146.65	1,854.59	2,001.24
" No. 85	44,890.41	4,441.43	49,331.84
" No. 86	1,414.02	5,924.54	7,338.56
" No. 97	5.07	....	5.07
	$ 265,026.30	$ 32,783.51	$ 297,809.81
WELLAND: —			
Highway No. 3	$ 5,222.28	$ 10,374.69	$ 15,596.97
" No. 3A	3,936.81	4,101.91	8,038.72
" No. 3C	102.40	2,382.11	2,484.51
" No. 8	....	1,465.81	1,465.81
" No. 20	1,542.02	4,549.86	6,091.88
" No. 57	14,900.97	605.11	15,506.08
" No. 58	412.01	4,430.54	4,842.55
" No. Q	73,513.15	....	73,513.15
Preliminary Survey	11,662.44	....	11,662.44
	$ 111,292.08	$ 27,910.03	$ 139,202.11

County	Construction	Maintenance	Total
WELLINGTON:—			
Highway No. 6	$ 7,007.62	$ 28,455.42	$ 35,463.04
" No. 7	416.17	9,122.94	9,539.11
" No. 9	450.58	10,569.35	11,019.93
" No. 23	78.54	1,161.26	1,239.80
" No. 24	6,837.08	12,616.07	19,453.15
" No. 86	1,248.02	5,682.47	6,930.49
" No. 87	94.84	4,256.18	4,351.02
	$ 16,132.85	$ 71,863.69	$ 87,996.54
WENTWORTH:—			
Highway No. 2	$ 10,709.54	$ 13,595.32	$ 24,304.86
" No. 5	294.34	9,936.87	10,231.21
" No. 5B	2,694.19	11,321.38	14,015.57
" No. 6	7,864.41	8,840.65	16,705.06
" No. 8	5,280.20	11,625.48	16,905.68
" No. 20	731.14	15,540.47	16,271.61
" No. 20A	5.31	46.85	52.16
" No. 52	1,854.40	4,049.43	5,903.83
" No. 53	518.29	5,879.07	6,397.36
" No. 55	10.79	1,143.57	1,154.36
" No. 56	28,052.66	1,498.77	29,551.43
" No. 97	2,815.40	1,406.96	4,222.36
Dundas Diversion	11,119.73	2,461.57	13,581.30
Highway No. Q	393,052.47	804.25	393,856.72
Preliminary Survey	5,217.40	....	5,217.40
	$ 470,220.27	$ 88,150.64	$ 558,370.91
YORK:—			
Highway No. 2	$ 404,206.97	$ 15,742.48	$ 419,949.45
" No. 5	46,652.24	3,769.18	50,421.42
" No. 5A	9,914.75	1,865.05	11,779.80
" No. 7	28,969.04	18,189.49	47,158.53
" No. 9	1,755.21	1,549.11	3,304.32
" No. 11	12,355.80	33,143.37	45,499.17
" No. 27	133,368.84	24,707.97	158,076.81
" No. 49	126.51	1,099.87	1,226.38
" No. Q	488,422.40	6,809.87	495,232.27
	$ 1,125,771.76	$ 106,876.39	$ 1,232,648.15

District	Construction	Maintenance	Total
DISTRICT OF HALIBURTON:—			
Highway No. 28	$ 27.96	...	$ 27.96
" No. 35	3,359.96	28,361.04	31,721.00
Secondary Roads —			
Kinmount-Bancroft Road	$ 107,122.61	$ 5,549.44	$ 112,672.05
Minden-Kinmount Road	1,185.41	2,775.81	3,961.22
Minden-Redstone Lake Road	16,452.59	9,650.98	26,103.57
Carnarvon-Haliburton Road	1,472.42	1,588.12	3,060.54
Haliburton-Wilberforce Road	86,854.98	4,294.85	91,149.83
Mining Road —			
Gooderham-Nepheline Road	1,155.65	...	1,155.65
	$ 217,631.58	$ 52,220.24	$ 269,851.82
DISTRICT OF MUSKOKA:—			
Highway No. 11	$ 393,023.00	$ 70,789.99	$ 463,812.99
" No. 60	6,204.24	2,391.89	8,596.13
" No. 35	25.56	5,958.42	5,983.98
" No. 69	192,378.82	7,413.00	199,791.82
Secondary Roads —			
Huntsville-Baysville Road	$ 49,699.26	$ 6,727.83	$ 56,427.09
Bracebridge-Dorset Road	47,741.12	34,950.51	82,691.63
Bracebridge-Glen Orchard	46,440.51	5,949.06	52,389.57
Rosseau Road	502.50	10,805.64	11,308.14
Utterson Road	150.74	3,842.41	3,993.15
Windermere Road	4,163.32	4,916.77	9,080.09
Township Roads —			
Sinclair Township	$ 1,593.90	$ 17.48	$ 1,611.38
Baxter Township	5,991.29	765.00	6,756.29
Sanatorium Road	...	282.77	282.77
	$ 747,914.26	$ 154,810.77	$ 902,725.03
DISTRICT OF PARRY SOUND:—			
Highway No. 11	$ 312,896.28	$ 45,127.28	$ 358,023.56
" No. 69	505,059.09	35,383.12	540,452.21
Secondary Roads —			
Emsdale-Kearney-Sand Lake Road	$ 608.47	$ 4,226.99	$ 4,835.46
Emsdale-Sprucedale-Bear Lake and Bear Lake-Parry Sound	844.21	9,644.85	10,489.06
Seguin Falls-North Seguin	...	794.48	794.48
Rosseau-Hayes Corner	14,504.56	7,464.86	21,969.42
Waubamic-Lorimer Lake and Boakview	3.50	635.93	639.43
Dunchurch-Maple Island and Ardbeg	22.62	3,672.26	3,694.88
Burks Falls-Parry Sound	5,901.95	25,827.94	31,729.89
Sundridge-Magnetawan Road, and Spur	1,703.32	5,629.64	7,332.96
South River-Eagle Lake Road	3.03	722.71	725.74
Trout Creek-Loring Road	20,697.17	18,334.31	39,031.48
Powassan-Restoule Road, and Spur	8,698.04	13,055.31	21,763.35
Powassan-Chisholm Road	7.25	1,313.60	1,320.85
Lighthouse Beach Road	5.66	698.42	704.08
Nipissing-Fish Bay Road	46.77	510.74	557.51
Township Roads —			
Patterson Township	$ 403.93	...	$ 403.93
Hardy Township	887.81	...	887.84
McConkey Township	467.64	...	467.64
Henvey Township	721.66	...	721.66
Wallbridge Township	428.18	...	428.18
Wilson Township	450.90	...	450.90
Mills Township	887.88	...	887.88
Pringle Township	1,002.89	...	1,002.89
Gurd Township	1,461.76	...	1,461.76
Laurier Township	466.61	...	466.61
Lount Township	984.61	...	984.61
McKenzie Township	446.09		446.09
Harrison Township	2,524.56		2,524.56
Shawanaga Township	496.90		496.90
Burpee Township	53.01		53.01

District	Construction	Maintenance	Total
Parry Sound:- (Cont'd)			
Township Roads —			
Croft Township	1,225.01	....	1,225.01
Proudfoot Township	345.65	....	345.65
Spence Township	1,252.63	....	1,252.63
Monteith Township	932.36	....	932.36
Bethune Township	485.90	....	485.90
Conger Township	225.37	....	225.37
Nipissing Township	194.46	....	194.46
Chapman Township	84.47	....	84.47
	$ 887,442.23	$ 173,052.44	$ 1,060,494.67
Connecting Link, Town of Parry Sound and Department's proportion of cost of Gibson Street Subway	5,713.10	....	5,713.10
	$ 893,155.33	$ 173,052.44	$ 1,066,207.77
District of Nipissing: —			
Highway No. 11	$ 819,455.77	$ 31,142.88	$ 850,598.65
" No. 17	351,553.45	59,841.32	411,394.77
" No. 60	28,946.12	9,165.61	38,111.73
" No. 63	107,764.23	15,997.37	123,761.60
" No. 64	37,942.22	13,011.11	50,953.33
" No. 94	9,747.61	11,396.07	21,143.68
Secondary Roads —			
Mattawa-Temiskaming Road	68,448.64	144.18	68,592.82
Mattawa-Callander Road	640.31	5,432.70	6,073.01
Field-Verner-Lavigne Road	595.70	2,646.23	3,241.93
Field-River Valley-Afton Mine Road	14,478.24	7,521.45	21,999.69
River Valley-Warren Road	1,287.10	3,014.60	4,301.70
Hagar-Rutter-Wolseley Bay Road	62,372.68	17,004.84	79,377.52
Township Roads —			
Phelps Township	1,811.98	1,038.10	2,850.08
Grant Township	291.30	30.62	321.92
Bastedo Township	14.30	....	14.30
Gibbons Township	362.95	254.86	617.81
Badgerow Township	826.40	....	826.40
Crerar Township	616.35	....	616.35
Hugel Township	1,270.92	90.43	1,361.35
Kirkpatrick Township	1,834.88	....	1,834.88
McPherson Township	1,540.90	53.21	1,594.11
London Township	635.14	....	635.14
Falconer Township	749.17	....	749.17
Scollard Township	3,581.37	....	3,581.37
Haddo Township	110.00	25.70	135.70
Henry Township	521.24	....	521.24
Delamere Township	837.54	....	837.54
Bigwood Township	4,819.35	351.24	5,170.59
Boulter Township	....	108.10	108.10
Pedley Township	262.70	195.30	458.00
Calvin Township	88.00	....	88.00
Bonfield Township	250.40	98.90	349.30
Chisholm Township	631.21	3,495.94	4,127.15
Widdifield Township	234.85	....	234.85
Field Township	51.00	62.10	113.10
Casimir, Appleby and Jennings Twp	107.40	....	107.40
Mason and Cosby Township	132.90	....	132.90
	$ 1,524,814.32	$ 182,122.86	$ 1,706,937.18
District of Temiskaming: —			
Highway No. 11	$ 3,356,590.73	$ 79,459.16	$ 3,436,049.89
" No. 65	7,687.79	36,110.32	43,798.11
Secondary Roads —			
Cuniptau Mines Road	....	362.10	362.10
Bartlett's Point Road	10.80	2.25	13.05
Lorrain Road	1,647.12	2,506.84	4,153.96
Matabitchuan Road	....	156.00	156.00
Camp Lorrain Road	....	21.60	21.60

District	Construction	Maintenance	Total
Temiskaming:- (Con't)			
Secondary Roads —			
Haileybury West Road	2,050.42	3,719.54	5,769.96
North Temiskaming Road	582.03	23,554.18	24,136.21
Casey-Brethour Road	3,705.27	1,376.31	5,081.58
Greenwood's Bridge Road	2,489.35	1,502.58	3,991.93
Earlton-Hilliardton Road	181.65	855.79	1,037.44
North Road	1,431.84	1,519.34	2,951.18
Wendigo Road	313.21	837.36	1,150.57
Englehart-Skead Road	....	18.88	18.88
Krugerdorf Road	860.08	981.98	1,842.06
Boston Creek Road	3,148.99	126.27	3,275.26
Charlton Road	165.40	7,219.97	7,385.37
Charlton-Elk Lake Road	4,456.35	9,481.50	13,937.85
Armstrong-Hilliard Road	....	21.60	21.60
Milberta Road	1,491.38	912.41	2,403.79
Uno Park Road	24.80	919.61	944.41
McCool Road	....	794.19	794.19
Ashley Mines Road	6,009.87	3,168.16	9,178.03
Rahn Lake Mines Road	168.60	....	168.60
Gowganda Road	2,265.88	4,603.74	6,869.62
Silverado Road	133.20	39.75	172.95
Bestel Road	....	158.93	158.93
Gowganda-Westree Road	84,767.92	678.79	85,446.71
Township Roads —			
Strathy Township	29.20	....	29.20
Lorrain Township	1,796.23	....	1,796.23
Ingram Township	1,370.72	557.64	1,928.36
Pense Township	1,207.76	....	1,207.76
Marter Township	4,487.27	1,719.75	6,207.02
Pacaud Township	1,603.85	....	1,603.85
Catherine Township	504.77	....	504.77
Robillard Township	1,879.77	523.42	2,403.19
Sharpe Township	604.12	....	604.12
Savard Township	3,577.20	812.71	4,389.91
Bryce Township	2,004.16	141.36	2,145.52
Beauchamp Township	3,040.64	787.74	3,828.38
Henwood Township	3,597.30	154.09	3,751.39
Cane Township	2,254.11	144.87	2,398.98
Barber Township	247.24	....	247.24
Tudhope Township	769.53	....	769.53
Truax Township	59.00	....	59.00
Marquis Township	1,388.91	603.96	1,992.87
Otto Township	2,400.33	333.28	2,733.61
Eby Township	1,978.91	....	1,978.91
Hearst Township	5,017.55	....	5,017.55
Smythe Township	49.85	....	49.85
Lundy Township	100.19	....	100.19
Blain Township	723.35	....	723.35
Coleman Township	2,956.89	....	2,956.89
Bucke Township	920.33	....	920.33
Harris Township	....	12.20	12.20
Brethour Township	1,024.90	....	1,024.90
James Township	41.80	....	41.80
	$3,525,818.56	$ 186,900.17	$3,712,718.73
DISTRICT OF SOUTH COCHRANE:—			
Highway No. 11	$ 219,699.75	$ 81,724.23	$ 301,423.98
" No. 66	8,246.55	50,523.25	58,769.80
" No. 67	569,174.84	32,869.76	602,044.60
Secondary Roads —			
Goldthorpe Road	107.41	304.34	411.75
Old Matheson Ramore Road	45.48	....	45.48
Munro Road	594.21	269.47	863.68
Matheson-Shillington-Hoyle-Barbers Bay	845,586.93	....	845,586.93
Shillington-Monteith-Iroquois Falls	1,266.47	4,998.37	6,264.84
Connaught to Nighthawk Center	1,631.74	1,139.52	2,771.26

District	Construction	Maintenance	Total
South Cochrane:- (Cont't)			
Secondary Roads —			
Nellie Lake Road	....	134.84	134.84
South Road-Golden City to Timmins	28,383.62	12,916.70	41,300.32
Township Roads —			
Lebel-Gauthier-McVittie-McGarry Twps	36.61	447.38	483.99
Melba Township	67.65	....	67.65
Maisonville Township	785.51	....	785.51
Benoit Township	2,896.16	....	2,896.16
Eby-Gross Townships	....	475.94	475.94
Hislop Township	8,247.80	....	8,247.80
Beatty Township	1,579.89	....	1,579.89
Teefy Township	....	60.56	60.56
Bowman Township	2,790.33	....	2,790.33
Currie Township	2,285.57	....	2,285.57
Bond Township	547.92	....	547.92
Carr Township	2,012.27	....	2,012.27
Taylor Township	5,623.25	....	5,623.25
Stock Township	4,342.80	....	4,342.80
German Township	1,736.45	....	1,736.45
Walker Township	3,097.94	....	3,097.94
Clergue Township	3,117.82	....	3,117.82
Dundonald Township	3,866.08	....	3,866.08
McCart Township	1,735.86	....	1,735.86
Newmarket Township	4,214.35	39.22	4,253.57
Matheson Township	1,878.09	....	1,878.09
Mountjoy Township	15,585.53	....	15,585.53
Deloro Township	....	22.18	22.18
Playfair Township	8,034.33	1,005.85	9,040.18
Calvert Township	4,044.11	410.27	4,454.38
Mining Roads —			
Bidgood Mines Road	49.92	8.26	58.18
DeSantis Mine Road	3,090.01	....	3,090.01
Melba Mines Road	1,075.31	....	1,075.31
Coulson Mine Road	....	7.69	7.69
Consolidated Smelters Road	25.82	....	25.82
Arcadia Mine Road	141.17	....	141.17
Delnite Mine Road	3,207.03	....	3,207.03
Dayton Mine Road	40.34	....	40.34
Ross Mine Road	1,815.28	278.43	2,093.71
Argonaut Mine Road	165.87	....	165.87
Upper Canada Mines Road	5,869.48	....	5,869.48
Naybob Mines Road	1,553.61	....	1,553.61
Angite Mine Road	1,639.04	....	1,639.04
Preston East Dome Mines Road	503.58	....	503.58
	$ 1,772,439.78	$ 187,636.26	$ 1,960,076.04
DISTRICT OF NORTH COCHRANE:			
Highway No. 11	$ 406,203.88	$ 70,522.72	$ 476,726.60
Secondary Roads —			
Norembega Road	4,405.37	7,176.11	11,581.48
Genier Road	798.28	1,113.20	1,911.48
Gardiner Road	2,091.00	3,186.34	5,277.34
Remi Lake Road	297.66	358.47	656.13
Casgrain Lake Road	819.05	1,879.12	2,698.17
Ryland Road	13.62	2,028.45	2,012.07
Hearst-Coppell Road	5,244.61	12,584.26	17,828.87
Township Roads —			
Payne Township	3,365.33	549.94	3,915.27
Fox Township	4,970.51	731.75	5,702.26
Kennedy Township	1,805.05	291.58	2,096.63
Brower Township	1,884.20	282.46	2,166.66
Blount Township	1,981.17	76.92	2,058.09
Lamarche Township	2,899.04	1,205.76	4,104.80
Fournier Township	4,183.22	1,494.54	5,677.76
Clute Township	5,371.93	3,027.32	8,399.25
Leitch Township	6,441.46	441.94	6,883.40

District	Construction	Maintenance	Total
North Cochrane:- (Con't)			
Township Roads —			
Calder Township.	2,199.52	1,155.17	3,354.69
Colquhoun Township.	212.71	90.00	302.71
Kendrey Township.	. . . .	333.23	333.23
Haggart Township.	2,977.07	453.44	3,430.51
Shackleton Township.	3,328.86	156.64	3,485.50
Machin Township.	1,539.96	22.65	1,562.61
Nansen Township.	5,015.60	475.11	5,490.71
O'Brien Township.	14,717.31	1,762.19	16,479.50
Owens Township.	5,156.20	652.02	5,808.22
Williamson Township.	6,433.74	524.33	6,958.07
Idington Township.	2,725.85	724.70	3,450.55
McCrea Township.	4,580.39	606.61	5,187.00
McGowan Township.	2,046.18	17.04	2,063.22
Barker Township.	701.94	198.34	900.28
Eilber Township.	4,848.43	558.55	5,406.98
Devitt Township.	3,794.16	761.38	4,555.54
Kendall Township.	4,204.03	1,482.78	5,686.81
Casgrain Township.	2,355.77	846.69	3,202.46
Lowther Township.	3,062.24	278.37	3,340.61
Way Township.	8,168.37	1,177.54	9,345.91
Hanlan Township.	12,708.11	624.92	13,333.03
	$ 543,551.82	$ 119,852.58	$ 663,404.40
District of Sudbury: —			
Highway No. 17.	$ 971,815.13	$ 57,096.08	$ 1,028,911.21
Secondary Roads —			
Sudbury-Burwash.	1,940.67	12,717.08	14,657.75
Sudbury-Long Lake.	633.61	11,912.44	12,546.05
Sudbury-Levack-Benny.	28,155.43	27,277.70	55,433.13
Chelmsford-Blezard.	1,252.84	2,837.66	4,090.50
Sudbury-Capreol-Milnet-Timmins. . . .	3,892.18	13,144.40	17,036.58
Hanmer-Skead.	654.53	1,285.47	1,940.00
Sudbury-Falconbridge-Garson-Skead. .	26,039.66	25,252.89	51,292.55
Hagar-Veuve.	1,411.24	1,204.45	2,615.69
Markstay — North and South.	874.73	1,119.63	1,994.36
Wanapitae — North and South.	1,000.83	1,719.24	2,720.07
Coniston-Garson.	553.28	708.35	1,261.63
Trout Lake-Copper Cliff.	. . . .	1.67	1.67
Whitefish-Penage.	1,180.05	1,970.95	3,151.00
Sault-Creighton.	141.78	964.47	1,106.25
Copper Cliff-Creighton.	360.80	9,356.32	9,717.12
Sudbury-Frood.	476.53	41.51	518.04
Foleyet-Ivanhoe Lake.	230.04	748.21	978.25
Westree-Houston Lake.	. . . .	506.96	506.96
Chapleau-Iron Bridge.	675.46	1,275.93	1,951.39
Township Roads —			
Loughrin Township.	218.54	871.16	1,089.70
Street Township.	62.24	216.46	278.70
Awrey Township.	763.00	109.84	872.84
Dryden Township.	747.41	1,122.64	1,870.05
Cleland Township.	1,762.36	1,026.87	2,789.23
Broder Township.	2,303.72	1,717.21	4,020.93
Dill Township.	561.40	785.25	1,346.65
Trill Township.	157.12	40.44	197.56
Snider Township.	148.80	345.64	494.44
Creighton Township.	214.15	763.43	977.58
Fairbank Township.	733.61	257.70	991.31
Ermatinger Township		237.36	237.36
Moncrieff Township.	856.90		856.90
Morgan Township.	1,051.35		1,051.35
Lumsden Township.	1,057.42	216.86	1,274.28
Capreol Township.	1,468.50	388.15	1,856.65
MacLennan Township.	24.38	225.84	250.22
Falconbridge Township.	354.59	213.62	568.21
Burwash Township.	1,068.02	1,085.79	2,153.81
Hawley Township.		159.99	159.99

District	Construction	Maintenance	Total
Sudbury:- (Con't)			
Township Roads —			
Hagar Township	....	29.18	29.18
McKim Township	9.46	371.62	381.08
Waters Township	34.04	26.19	60.23
Denison Township	....	1.76	1.76
Drury Township	24.53	101.49	126.02
Rayside Township	67.10	53.74	120.84
Balfour Township	....	9.33	9.33
Blezard Township	107.24	.75	107.99
Hanmer Township	....	121.31	121.31
Garson Township	8.56	....	8.56
Mining Roads —			
Lebel-Oro-Naughton	5,884.06	285.51	6,169.57
Benny-Lake Geneva	....	7.10	7.10
Gogama-Three Duck Lake	1,022.51	....	1,022.51
Westree-Houston Lake	12,003.73	1,025.62	13,029.35
Ramsay-Opeepeesway Lake	5,068.35	....	5,068.35
	$1,079,071.88	$ 182,959.26	$1,262,031.14
DISTRICT OF ALGOMA-MANITOULIN: —			
Highway No. 17	$1,616,599.18	$ 138,488.65	$1,755,087.83
Highway No. 68	31,329.31	25,501.29	56,830.60
Secondary Roads —			
Little Current to Gore Bay	6,959.75	12,195.65	19,155.40
Gore-Bay-Providence-Mindemoya	2,813.44	5,096.58	7,910.02
West Bay-Tehkummah	3,945.66	7,200.88	11,146.54
Gore Bay-Meldrum Bay	1,873.06	8,486.64	10,359.70
Little Current-South Baymouth	12,792.24	15,807.02	28,599.26
Sable River Road	783.58	756.44	1,540.02
Blind River-Lake Duborne	848.06	688.37	1,536.43
Matinenda Road	826.40	885.43	1,711 83
Iron Bridge-Hooverville	....	1,263.17	1,263.17
Thessalon-Hooverville	3,035.31	2,036.65	5,071.96
Hooverville North	583.87	4,493.19	5,077.06
White River Road	2,530.05	1,291.78	3,821.83
Dunn's Valley Road	716.46	2,940.18	3,656.64
St. Joseph's Island Belt Line	4,010.96	21,991.80	26,002.76
Espanola-Lake Penage	....	519.70	519.70
Shakespeare Road	....	239.98	239.98
Township Roads —			
Dawson Township	....	388.68	388.68
Robinson Township	10.71	866.96	877.67
Mills Township	....	988.34	988.34
Campbell Township	225.06	2,165.23	2,390.29
Merritt Township	11.70	54.40	66.10
Foster Township	173.80	221.09	394.89
McKinnon Township	....	363.29	363.29
Shakespeare Township	170.54	....	170.54
Victoria Township	897.65	590.34	1,487.99
Shedden Township	....	702.34	702.34
Striker Township	482.23	1,353.50	1,835.73
Cobden Township	521.49	2,197.40	2,718.89
Patton Township	175.61	373.50	549.11
Bright Township	....	696.21	696.21
Gladstone Township	....	148.28	148.28
Wells Township	758.58	13.90	772.48
Kirkwood Township	....	159.11	159.11
Rose Township	....	105.10	105.10
Galbraith Township	1,034.52	143.85	1,178.37
Morin Township	....	92.38	92.38
Plummer Township	67.24	284.61	351.85
Aberdeen Township	2,989.79	176.00	3,165.79
McMahon Township	865.76	43.80	909.56
Burpee Township	2.00	....	2.00
Gordon Township	14.65	33.05	47.70
Carnarvan Township	5.05	300.73	305.78
Howland Township	10.10	....	10.10

District	Construction	Maintenance	Total
Algoma-Manitoulin (Con't)			
Township Roads —			
Bidwell Township	799.77	584.71	1,384.48
Shequiandah Township	...	95.55	95.55
Tehkummah Township	6.95	86.70	93.65
Nairn Township	100.00	...	100.00
Baldwin Township	439.62	...	439.62
Salter Township	265.55	1.40	266.95
Thessalon Township	14.05	162.04	176.09
Plummer Additional Township	489.00	...	489.00
Tarbutt Additional Township	...	22.00	22.00
Laird Township	28.00	...	28.00
McDonald Township	...	207.90	207.90
Louise Township	712.37	802.38	1,514.75
Lorne Township	412.60	1,935.80	2,348.40
	$1,701,331.72	$ 266,243.97	$1,967,575.69
SAULT STE. MARIE: —			
Highway No. 17	$ 519,472.83	$ 48,514.70	$ 567,987.53
Secondary Roads —			
Second Line (Gros Cap)	461.82	8,210.66	8,672.48
Island Lake to Wabas	1,343.24	6,065.49	7,408.73
Peoples Road	...	3,168.03	3,168.03
Crystal Falls Road	83.48	2,994.31	3,077.79
Point Aux Pins Road	1.92	582.42	584.34
Goulais River to White Birches	617.71	453.52	1,071.23
Bellevue Valley Road	...	38.14	38.14
Oba Road	3,205.46	...	3,205.46
Township Roads —			
Kehoe Township	204.96	...	204.96
Hodgins Township	...	230.38	230.38
Gaudette Township	...	1,087.91	1,087.91
Shields Township	...	53.30	53.30
VanKoughnet Township	...	440.33	440.33
Pennefather	...	380.34	380.34
Fenwick Township	1,506.49	150.90	1,657.39
Kars Township	3,101.21	6.43	3,107.64
Fisher Township	289.50	22.15	311.65
Korah Township	...	6.29	6.29
Wicksteed Township	5,439.72	...	5,439.72
Mining Roads —			
Wawa-Michipicoten River	...	113.20	113.20
Wawa-Minto Grace Mine	467.48	1,077.02	1,544.50
Michipicoten River-Michipicoten Hrbr	5,309.74	...	5,309.74
Hawk Jct.-Murray Algoma Mine	3.00	...	3.00
Goudreau-Lochalsh	660.81	1,237.07	1,897.88
Helen Mine Road	33,935.92	...	33,935.92
Hiawatha Mine Road	5,168.85	...	5,168.85
	$ 581,274.14	$ 74,832.59	$ 656,106.73
PORT ARTHUR: —			
Highway No. 17	$ 203,583.61	$ 32,251.65	$ 235,835.26
Highway No. 17A	2,072.90	4,391.07	6,463.97
Secondary Roads —			
Oliver Road	5,380.63	7,912.82	13,293.45
Dog Lake Road	5,950.69	3,656.95	9,607.64
Silver Island Road	3,449.93	3,850.44	7,300.37
Nipigon-Beardmore Road	598,574.94	2,038.26	600,613.20
Beardmore-Geraldton Road	511,294.57	7,921.68	519,216.25
Red Rock Road	2,748.56	...	2,748.56
Heron Bay Road	831.60	...	831.60
Armstrong Airport Road	60,802.49	...	60,802.49
Township Roads —			
Gorham Township	2,319.23	2,850.31	5,169.54
Ware Township	3,890.87	1,508.40	5,399.27
Jacques Township	1,776.80	166.50	1,943.30
Fowler Township	80.80	...	80.80

District	Construction	Maintenance	Total
Port Arthur:- (Con't)			
Township Roads —			
Sibley Township	2,121.02	445.71	2,566.73
Dorion Township	1,489.80	2,975.74	4,465.54
Stirling Township	801.47	676.91	1,478.38
Lyons Township	557.07	264.00	821.07
Nakina Township	1,585.38	694.63	2,280.01
Armstrong Township	493.20	133.45	626.65
Booth Township	591.45	....	591.45
Port Coldwell	15,147.40	....	15,147.40
Conmee Township	1,340.34	370.50	1,710.84
McIntyre Township	2,717.68	1 060.24	3,777.92
McTavish Township	566.95	.75	567.70
McGregor Township	....	65.15	65.15
Mining Roads —			
Beardmore-Sand River	23,633.89	....	23,633.89
Sturgeon River Area	14,411.97	....	14,411.97
Hutchison Lake	546.94	....	546.94
Geraldton-Bankfield	2,232.96	....	2,232.96
Schreiber Area	2,719.60	....	2,719.60
Kenwell-Bankfield Area	15,422.82	....	15,422.82
	$ 1,489,137.56	$ 73,235.16	$ 1,562,372.72
FORT WILLIAM: —			
Highway No. 17	$ 96,735.62	$ 24,270.24	$ 121,005.86
Highway No. 61	144,558.59	25,304.61	169,863.20
Secondary Roads —			
Silver Mountain Road	7,703.55	8,635.86	16,339.41
Kakabeka-Nolalu Road	11,780.53	4,836.06	16,616.59
Hymers-Scoble Road	14,348.83	6,096.72	20,445.55
Pearson-Pardee Loop	2,634.52	4,977.31	7,611.83
Twin City Cross Road	25.00	2,032.22	2,057.22
Kashabowie Road	180,691.24	3,449.51	184,140.75
Devon Road	2,452.89	1,671.60	4,124.49
Township Roads —			
Marks Township	963.91	828.25	1,792.16
Lybster Township	1,520.93	215.80	1,736.73
Strange Township	862.83	603.00	1,465.83
Devon Township	1,296.79	118.60	1,415.39
Scoble Township	1,392.27	1,160.92	2,553.19
Pearson Township	7,175.95	479.60	7,655.55
Dawson Road Lots	3,574.66	421.05	3,995.71
Forbes Township	3,430.53	1,031.28	4,461.81
Goldie Township	828.26	105.65	933.91
Upsala Township	5,581.18	3,515.26	9,096.44
Indian Reserve	....	6.60	6.60
Graham Area	568.00	....	568.00
Oliver Township	960.78	107.50	1,068.28
O'Connor Township	259.90	43.20	303.10
Gillies Township	403.43	1.60	405.03
Parkee Township	1,189.52	25.00	1,214.52
Blake Township	1,599.25	....	1,599.25
Crooke Township	106.60	127.24	233.84
Paipoonge Township	3,450.59	763.27	4,213.86
Neebing Township	....	442.62	442.62
Mining Road —			
Pickle Crow	24,287.95	....	24,287.95
	$ 520,384.10	$ 91,270.57	$ 611,654.67
KENORA: —			
Highway No. 17	$ 1,259,084.27	$ 55,405.33	$ 1,314,489.60
Highway No. 70	1,725,628.14	18,964.18	1,744,592.32
Highway No. 72	239,749.26	33,104.18	272,853.44
Secondary Roads —			
Dyment Road	2,643.12	1,068.11	3,711.23
Rice Lake Loop Road	809.66	2,969.55	3,779.21
Richan Road	10.35	3,852.72	3,863.07
Aubrey-Eton Road	8,487.08	1,499.18	9,986.26
Pine Grove Road	1,298.13	846.29	2,144.42

District	Construction	Maintenance	Total
Kenora:- (Con't)			
Secondary Roads —			
Quibell Road	6,107.25	5,111.52	11,218.77
South Aubrey Road	1,128.89	3,744.91	4,873.80
East Melick Road	15,340.33	9,725.11	25,065.44
Redditt Road	1,738.27	6,918.63	8,656.90
Pellatt Loop Road	7,594.18	6,164.32	13,758.50
Rabbit Lake Road	150.15	947.92	1,098.07
Township Roads —			
Melgund Township	2,300.74	654.51	2,955.25
Southworth Township	2,469.41	301.39	2,770.80
Zealand Township	15,608.46	1,623.03	17,231.49
Van Horne Township	4,601.82	258.24	4,860.06
Wainwright Township	1,300.77	329.36	1,630.13
Britton Township	2,702.51	209.22	2,911.73
Rowell Township	1,171.08	669.98	1,841.06
Aubrey Township Road	269.87	558.01	827.88
Eton Township	2,009.24	1,056.09	3,065.33
Rugby Township	637.68	221.13	858.81
Sanford Township	112.28	231.26	343.54
Temple Township	16.96	20.18	37.14
Mutrie Township	1,272.41	2,181.23	3,453.64
Buller Township	7.45	....	7.45
Langton Township	....	65.82	65.82
Wabigoon Township	9,220.98	1,657.51	10,878.49
Redvers Township	7,326.20	1,053.76	8,379.96
Smellie Township	23.47	....	23.47
Haycock Township	3.55	....	3.55
Jaffray Township	51,999.75	....	51,999.75
Melick Township	1,103.59	....	1,103.59
Pellatt Township	1,135.75	1,328.25	2,464.00
Umback Township	7.25	137.58	144.83
Drayton Township	7.21	....	7.21
Unsurveyed Territory	882.62	74.70	957.32
Mining Roads —			
Wendigo Mine Road	1,370.10	81.81	1,451.91
Unsurveyed Territory	166,972.93	....	166,972.93
Unsurveyed Territory (Credit)	18.00	....	18.00
	$3,544,285.16	$ 163,035.01	$3,707,320.17
Connecting Links	38,563.99	....	38,563.99
	$3,582,849.15	$ 163,035.01	$3,745,884.16
RAINY RIVER:—			
Highway No. 70	$ 195,632.77	$ 32,344.80	$ 227,977.57
Highway No. 70A	11,616.87	5,464.22	17,081.09
Highway No. 71	431,026.89	24,353.90	455,380.79
Secondary Roads —			
Border Mill Road	85.00	1,002.03	1,087.03
Frog Creek Road	....	2,876.32	2,876.32
Crozier Road	362.82	6,543.28	6,906.10
LaVallee Road	1,088.10	5,418.27	6,506.37
Devlin Road	6,049.70	8,239.19	14,288.89
Barnhart Road	2,158.50	1,613.85	3,772.35
Clearwater Lake Road	....	1,588.87	1,588.87
Stratton Road	17,484.22	4,476.20	21,960.42
Arbor Vitae Road	1,453.90	5,463.74	6,917.64
Spohn Road	2,824.72	4,262.70	7,087.42
Spohn River Road	186.80	3,796.98	3,983.78
River Road	5,113.62	6,457.72	11,571.34
Dearlock Road	373.58	2,856.65	3,230.23
Tovell Road	....	3,133.78	3,133.78
Mine Centre Road	459.94	....	459.94
Atikokan Road	1,243.88	207.28	1,451.16
Sleeman-Morson Road	23,556.04	11,963.52	35,519.56

District	Construction	Maintenance	Total
Rainy River:- (Con't)			
Township Roads —			
Miscampbell Township	1,000.60	....	1,000.60
Dance Township	255.82	....	255.82
Kingsford Township	1,733.70	....	1,733.70
Sifton Township	1,354.14	....	1,354.14
Dewart Township	490.39	....	490.39
Nelles Township	601.00	....	601.00
Sutherland Township	899.40	....	899.40
Pratt Township	121.95	....	121.95
Spohn Township	1,355.40	....	1,355.40
Unorganized Townships	542.01	....	542.01
Mining Roads —			
Straw Lake Portages	1,101.04	....	1,101.04
Atikokan Road	15,405.12	....	15,405.12
	$ 725,577.92	$ 132,063.30	$ 857,641.22
Tyendinaga Indian Reserve: —			
Highway No. 2	$ 24.40	$ 1,512.80	$ 1,537.20
Town of Leamington: —			
Highway Nos. 3 and 18	80.01	129.30	209.31
Stock	2,085.34	9,646.60	11,731.94
Lands and Buildings	40,011.49	4,466.52	44,478.01
GRAND TOTAL	$32,386,895.69	$4,598,317.82	$36,985,213.51

APPENDIX No. 2

GROSS EXPENDITURE BY ROADS

April 1, 1938, to March 31, 1939

Highway No.	Location	Mileage	Construction	Maintenance	Total
2	Windsor-Quebec Boundary....	541.1	$1,761,938.27	$258,323.27	$2,020,261.54
2A	Windsor-Tilbury............	34.5	1,308.06	7,868.67	9,176.73
3	Windsor-Fort Erie...........	260.	260,167.12	88,190.37	348,357.49
3A	Chambers Corners-St. Catharines................	25.5	3,936.81	4,101.91	8,038.72
3B	Junction Highway No. 3-Windsor..................	6	196.80	2,039.76	2,236.56
3C	Ridgeway-Fort Erie..........	7.5	102.40	2,382.11	2,484.51
4	Port Stanley-Flesherton.......	155.5	404,141.38	62,671.26	466,812.64
5	Toronto-Paris................	64.1	48,189.13	31,540.74	79,729.87
5A	Leaside-Kingston Road.......	4.1	9,914.75	1,865.05	11,779.80
5B	Dundas-Junction Highway No. 5....................	16.5	2,901.84	13,747.14	16,648.98
6	Port Dover-Tobermory........	225.1	34,282.72	122,148.61	156,431.33
7	Sarnia-Ottawa...............	465	280,695.79	152,069.96	432,765.75
7A	Manchester-Peterborough.....	42	10,797.96	7,519.54	18,317.50
8	Niagara Falls-Goderich........	155.7	241,893.49	59,909.82	301,803.31
9	Schomberg-Kincardine........	112.8	16,656.79	40,242.40	56,899.19
10	Port Credit-Owen Sound......	105	240,313.25	47,758.21	288,071.46
11	Toronto-Hearst.............	636.3	5,554,308.44	443,413.96	5,997,722.40
12	Whitby-Midland............	97.7	154,088.19	55,685.22	209,773.41
14	Picton-Marmora............	51.4	128,478.77	21,455.86	149,934.63
15	Ottawa-Kingston............	131	25,472.65	51,328.91	76,801.56
16	Ottawa-Prescott............	62.3	2,010.67	22,848.27	24,858.94
17	Quebec Boundary-Mamainse-Nipigon to Manitoba Bdry...	1058.4	5,277,541.02	545,421.75	5,822,962.77
17A	Port Arthur-Highway No. 17..	23.2	2,072.90	4,391.07	6,463.97
18	Leamington-Windsor..........	49	9,290.75	11,980.38	21,271.13
18A	Kingsville-Highway No. 18....	18	7,544.40	14,041.16	21,585.56
18B	Ruthven-Highway No. 18.....	1	330.65	822.42	1,153.07
19	Port Burwell-Tralee..........	92.2	216,370.83	21,588.09	237,958.92
20	Niagara Falls-Burlington......	53.3	2,289.00	30,206.34	32,495.34
20A	Highway No. 20 to Hamilton..	1.36	5.31	46.85	52.16
21	Morpeth-Owen Sound.........	207	655,050.27	78,902.72	733,952.99
22	London-Sarnia...............	66.8	5,759.88	9,877.05	15,636.93
23	London-Arthur..............	86.3	41,021.60	22,008.13	63,029.73
24	Port Dover-Collingwood.......	143.4	17,213.46	58,882.46	76,095.92
24A	Paris-Galt..................	13.1	15,916.63	3,486.34	19,402.97
25	Burlington-Acton............	29.8	9,074.91	8,540.23	17,615.14
26	Barrie-Owen Sound..........	74.6	3,793.44	36,077.97	39,871.41
27	Schomberg-Midland-Penetang..	62.1	137,209.33	68,146.35	205,355.68
28	Port Hope-Apsley...........	67.9	159,739.63	36,206.41	195,946.04
29	Brockville-Arnprior..........	76.4	59,089.84	29,976.91	89,066.75
30	Brighton-Havelock..........	32	7,299.50	21,722.64	29,022.14
31	Morrisburg-Ottawa..........	48.	98,245.02	23,647.95	121,892.97
32	Gananoque-Smiths Falls.......	47.9	535.34	7,380.68	7,916.02
33	Marmora-Trenton-Kingston...	101.3	403,843.80	28,187.09	432,030.89
34	Lancaster-Hawkesbury........	38.1	172,439.01	16,726.69	189,165.70
35	Newcastle-Huntsville.........	144.2	200,467.88	61,807.82	262,275.70
36	Lindsay-Burleigh Falls........	47.5	318,769.86	9,806.12	328,575.98
37	Belleville-Actinolite..........	29.3	31,965.15	18,249.86	50,215.01
38	Kingston-Sharbot Lake.......	47.1	260,944.56	18,754.16	279,698.72
39	Windsor-Belle River..........	27.2	6,261.16	7,163.12	13,424.28
40	Sarnia-Chatham.............	50.1	49,762.78	19,521.32	69,284.10
41	Picton-Golden Lake..........	140.6	378,430.59	44,163.51	422,594.10
42	Brockville-West Port.........	43.	2,307.90	19,236.30	21,544.20
43	Alexandria-Winchester........	40.4	6,586.55	22,969.10	29,555.65
44	Almonte-Carp...............	14	2,739.64	13,788.48	16,528.12
45	Cobourg-Norwood...........	33	268.79	12,055.49	12,324.28
46	Highway No. 7-Coboconk.....	34	4,628.64	22,413.13	27,041.77

APPENDIX No. 2
GROSS EXPENDITURE BY ROADS
April 1, 1938 to March 31, 1939

Highway No.	Location	Mileage	Construction	Maintenance	Total
47	Highway No. 12-Stouffville	19	5,118.91	13,441.57	18,560.48
48	Port Bolster-Beaverton	6	350.93	9,207.81	9,558.74
49	Kleinburg-Highway No. 50	3.5	126.51	1,099.87	1,226.38
50	Highway No. 7-Highway No. 9, via Bolton	18	9,438.26	19,625.53	29,063 79
51	Highway No 24-Highway No. 10-Caledon	2.5	466.39	822.44	1,288.83
52	Wentworth County Line-Highway No. 2	18.5	1,854.40	4,049.43	5,903.83
53	Woodstock-Highway No. 20	53.7	112,452.79	16,137.49	128,590.28
54	Cainsville-Cayuga	27	1,384.75	15,907.81	17,292.56
55	Highway No. 53-Hamilton	4	10.79	1,143.57	1,154.36
56	Junction Highway No. 53 and No. 20-Canfield	15.5	28,052.66	5,257.94	33,310.60
57	Bismark-Highway No. 3A	9	15,648.83	4,075.26	19,724.09
58	Welland-Humberstone	6.5	921.26	6,449.15	7,370.41
59	Woodstock-Delhi	26.5	2,815.64	21,437.19	24,252.83
60	Huntsville-Lake Dore	135.6	276,708.07	37,019.32	313,727.39
61	Fort William-U. S. Boundary	43	144,558.59	25,304.61	169,863.20
62	Madoc-Pembroke	135	334,411.71	44,425.44	378,837.15
63	North Bay-Temiskaming	41	107,764.23	15,997.37	123,761.60
64	Sturgeon Falls-Martin River	34.6	37,942.22	13,011.11	50,953.33
65	New Liskeard-Matachewan	66.7	7,687.79	36,110.32	43,798.11
66	Swastika-Quebec Boundary	33.7	8,246.55	50,523.25	58,769.80
67	Iroquois Falls-Timmins	43.6	569,174.84	32,869.76	602,044.60
68	Espanola-Little Current	35	31,329.31	25,501.29	56,830.60
69	Atherly-Pointe Au Baril	105.4	703,287.72	50,498.17	753,785.89
70	Kenora-Fort Frances	143	1,921,260.91	51,308.98	1,972,569.89
70A	Barwick to Junction Highway No. 70	14	11,616.87	5,464.22	17,081.09
71	Fort Frances-Rainy River	60	431,026.89	24,353.90	455,380.79
72	Dinorwic-Sioux Lookout-Hudson	101	239,749.26	33,104.18	272,853.44
73	Port Bruce-Dorchester Rd.	23	132,044.26	8,657.98	140,702.24
74	New Sarun-Nilestown	14	17,567.83	6,645.16	24,212.99
75	Wallacetown-Dutton	2.5	191.07	637.00	828.07
76	Eagle-West Lorne	3.5	138.75	700.00	838.75
77	New Glasgow-Rodney	4	210.48	735.00	945.48
78	Wallaceburg-Dresden	10.5	1,779.16	2,486.67	4,265.83
79	Highway No. 2-Watford	25.5	15,008.47	14,117.76	29,126.23
80	Highway No. 2-Alvinston	13	3,704.02	6,715.51	10,419.53
81	Delaware-Grand Bend	44	4,024.49	15,378.52	19,403.01
82	Highway No. 7-Port Franks	7	9,206.77	2,399.23	11,606.00
83	Highway No. 21-Highway No. 23 via Dashwood	24	21,839.02	15,879.84	37,718.86
84	St. Joseph-Hensall	10.5	1,773.60	8,186.54	9,960.14
85	Kitchener-Elmira	12	44,890.41	4,441.43	49,331.84
86	Amberley-Highway No. 7	79	18,832.92	33,283.02	52,115.94
87	Bluevale-Harriston	19.5	379.35	15,175.76	15,555.11
88	Bondhead-Bradford	6	333.75	1,807.53	2,141.28
89	Primrose-Cookstown	23.5	34,180.97	21,538.90	55,719.87
90	Angus-Allandale	11	1,989.18	18,622.45	20,611.63
91	Duntroon-Stayner	5.2	514.44	4,005.73	4,520.17
92	Elmvale-Wasaga Beach	9	55,546.40	8,781.99	64,328.39
93	Crown Hill Waverley	17.5	5,866.53	12,393.75	18,260.28
94	Callander-Highway No. 17	6.5	9,747.61	11,396.07	21,143.68
95	Wolfe Island North and South	7	1,465.92	2,063.94	3,529 86
96	Wolfe Island East and West	20	4,072.76	4,490.36	8,563.12
97	Hickson-Freelton	44.5	2,826.02	1,406.96	4,232.98

APPENDIX No. 2

GROSS EXPENDITURE BY ROADS

April 1, 1938, to March 31, 1939

Highway No.	Location	Mileage	Construction	Maintenance	Total
	Pelee Island	6	1,121.93	743.81	1,865.74
	Perch Creek Diversion	3.66	63,492.76	192.56	63,685.32
	Sarnia North Lake Shore Credit	33.7	535.00	....	535.00
	Sarnia-Point Edward International Bridge		488,017.27	....	488,017.27
	Woodstock-Thamesford	12	461.43	4,634.78	5,096.21
	Blue Lake Road	3.8	115.10	681.30	796.40
	Princeton North	3.1	75.45	101.09	176.54
	Keg Lane	5.88	676.53	1,316.49	1,993.02
	Queen Elizabeth Way		2,557,516.16	60,886.82	2,618,402.98
	Brants Park		858.89	1,228.53	2,087.42
	Dundas Diversion	2.2	11,119.73	2,461.57	13,581.30
	River Road		1,597,630.28	7,468.45	1,605,098.73
	Fort Henry Road		4,529.07	303.02	4,832.09
	Total King's Highways		27,863,226.16	3,714,599.34	31,577,825.50
	Total Secondary Roads, see Schedule No. 1 for details		3,375,694.63	769,458.88	4,145,153.51
	Total Township Roads Expenditure, see Schedule No. 1		515,623.73	99,204.48	614,828.21
	Total Mining Roads Expenditure, see Schedule No. 1		385,041.25	4,121.71	389,162.96
	Total Lands and Buildings		40,011.49	4,466.52	44,478.01
	Total Preliminary Surveys, see Schedule No. 1 for details		24,219.27	....	24,219.27
	Total Stock		2,085.34	9,646.60	11,731.94
	Fort Henry		180,993.82	....	180,993.82
			$32,386,895.69	$4,598,317.82	$36,985,213.51

APPENDIX No. 3

SCHEDULE OF ASSUMPTIONS AND REVERSIONS OF SECTIONS OF THE KING'S HIGHWAY SYSTEM FOR THE FISCAL YEAR ENDING MARCH 31st, 1939.

During the year the system was extended by assuming 510.60 miles, less 23.89 miles reverted, making a total assumed of 7,242.27 miles. A list of the roads added to the system, together with the mileage and date of designation, also a list of roads and mileages reverted from the system is as follows:

The King's Highways Assumed Between March 31, 1938, and March 31, 1939.

Location of Road	District	Assumed Date	Miles
St. George W. (North of Paris)	Brant	April 13, 1938	5.0
Governor's Road	Brant	April 13, 1938	4.0
Carp Southwesterly	Carleton	April 13, 1938	9.3
Orangeville S.	Dufferin	April 13, 1938	0.3
Highway No. 12 to Highway No. 28	Durham	April 13, 1938	28.8
Newcastle to Lindsay	Durham	April 13, 1938	27.0
Highway No. 31 to Alexandria	Dundas	April 13, 1938	9.8
Port Bruce	Elgin	July 27, 1938	0.9
Kingsville to Highway No. 18	Essex	April 13, 1938	18.9
Highway No. 31 to Alexandria	Glengarry	April 13, 1938	11.2
Tweed Village	Hastings	Oct. 19, 1938	0.2
Millbridge Northerly	Hastings	Mar. 22, 1939	24.8
St. Joseph to Hensall	Huron	April 13, 1938	10.6
Highway No. 23 to Highway No. 21 via Dashwood	Huron	April 13, 1938	21.2
Dresden to Wallaceburg	Kent	April 13, 1938	10.25
Highway No. 82 to Highway No. 21	Lambton	May 25, 1938	0.02
Almonte to Carp	Lanark	April 13, 1938	2.2
Brockville Town	Leeds	May 25, 1938	0.09
Picton to Napanee	Lennox and Addington	April 13, 1938	2.2
Highway No. 12 to Highway No. 28	Ontario	April 13, 1938	5.2
Whitby to Oshawa	Ontario	Oct. 19, 1938	2.5
St. George W.	Oxford	April 13, 1938	3.1
Woodstock to Thamesford	Oxford	June 8, 1938	12.0
Freelton to Hickson	Oxford	Sept. 28, 1938	20.0
Highway No. 11	Parry Sound	April 13, 1938	5.5
Parry Sound Town	Parry Sound	May 25, 1939	0.5
Caledon W. and Orangeville S.	Peel	April 13, 1938	12.4
Highway No. 23 to Highway No. 21 via Dashwood	Perth	April 13, 1938	3.8
Picton to Napanee	Prince Edward	April 13, 1938	9.8
Renfrew Town	Renfrew	May 25, 1938	1.1
Pembroke Northwesterly (omitted in previous report)	Renfrew	June 30, 1937	76.3
Crown Hill to Waverley	Simcoe	April 13, 1938	17.3
Bradford to Bond Head	Simcoe	April 13, 1938	5.8
Port McNicoll W.	Simcoe	April 13, 1938	0.4
Highway No. 12	Simcoe	May 25, 1938	0.8
Port McNicoll	Simcoe	Sept. 28, 1938	0.15
Highway No. 31 to Alexandria	Stormont	April 13, 1938	20.7
Newcastle to Lindsay	Victoria	April 13, 1938	6.0
Bobcaygeon Village	Victoria	April 13, 1938	0.19
Bobcaygeon Village	Victoria	Sept. 28, 1938	0.9
Elmira to Weissenburg	Waterloo	April 13, 1938	8.2
Freelton to Hickson	Waterloo	Sept. 28, 1938	11.6
Welland City	Welland	Sept. 28, 1938	0.03
Weissenburg to Highway No. 7	Wellington	April 13, 1938	5.25
Peters Corners Southerly to Highway No. 2	Wentworth	April 13, 1938	6.4
Governor's Road	Wentworth	April 13, 1938	13.2
Freelton to Hickson	Wentworth	Sept. 28, 1938	12.2
Vaughan Plank Road	York	July 27, 1938	0.5
Assumed by Land Plan			
Winchester Spring's Diversion	Dundas		1.9
Verona-Hartington Diversion	Frontenac		2.2
Gananoque-Brockville Diversion	Leeds		27.87
Coldwater-Warminster Diversion	Simcoe		3.55
Kingston Road Diversion	Ontario and York		26.50
			510.60

Reversions in the Fiscal Year Ending March 31st, 1939

County or District	Location	Date of Reversion	Miles
Carleton	(Becketts Landing)	June 7, 1938	0.53
Dundas	(Winchester Springs)	Aug. 1, 1938	2.27
Durham	Port Hope Town	Feb. 19, 1939	0.05
Grenville	(Becketts Landing)	June 7, 1938	0.68
Frontenac	(Verona to Hartington)	Jan. 10, 1938	3.75
Halton	(Maple Ave.)	June 7, 1938	1.37
Hastings	(Tweed Village)	Nov. 13, 1938	0.45
Lambton	Thedford	Sept. 20, 1938	0.67
Parry Sound	Novar N.	July 4, 1938	5.59
Peel	Port Credit	Feb. 19, 1938	0.23
Peterborough	Smith Township	June 7, 1938	0.39
Simcoe	Medonte Township	Sept. 10, 1938	4.36
Simcoe	Medonte Township	Sept. 20, 1938	0.75
Simcoe	Orillia S. Twp.	Dec. 10, 1938	0.24
Victoria	Fenelon Township	June 7, 1938	0.14
Victoria	Fenelon Township	Jan. 10, 1939	0.32
Victoria	Verulam Township	Dec. 10, 1938	0.25
Victoria	Verulam Township	Jan. 10, 1939	0.57
Victoria	Verulam Township	Jan. 27, 1939	0.25
Victoria	Verulam Township	Feb. 19, 1939	0.47
Victoria	Ops Township	Jan. 10, 1939	0.56
		Miles	23.89

BRIDGES COMPLETED ON THE

APPENDIX

Name	Type	Span	Road
Aux Sable River	Concrete Rigid Frame	1 at 65′	83
Barbers Bay	Steel Beams on Timber Bents	7 at 20′	Hy. 67 to Matheson-Timmins Rd.
Beaver Creek No. 4	Steel Beams on Timber Bents	2 at 27′ 7″—1 at 27′ 0″	62
Berry's Bridge	Timber Beams on Timber Cribs	1 at 20′	Warren-Rutter
Big Grassy River	Creosoted Timber Beams on Pile Bents	3 at 29′—5 at 15′	Sleeman-Morson
Black River (Ramore)	Timber Through Trusses, Timber Beams	2 at 30′—1 at 60′ 3 at 15′	
Bluewater Bridge	Steel Deck Trusses, Steel Beams	1 at 204′—1 at 260′ 36 variable from 44′-88′	At Point Edward
Boyne Extension	Concrete Beam	1 at 25′	69
C. N. R. Traffic Circle No. 1	Concrete Rigid Frame	1 at 52′	Burlington-Niagara Falls
C. N. R. Traffic Circle No. 2	Concrete Rigid Frame	1 at 52′	Burlington-Niagara Falls
Castor River (Middle Branch)	Concrete Rigid Frame	1 at 45′	31
Castor River (S. Branch)	Concrete Rigid Frame	1 at 35′—2 at 20′	31
Coniston Creek No. 2	Concrete Rigid Frame	1 at 40′	17
Creelman Creek	Creosoted Timber Truss Creosoted Timber Beam	1 at 60′ 2 at 15′	
Cuckoo Creek No. 1	Timber Truss Pile Trestle	1 at 35′ 2 at 15′—2 at 12′	
Cuckoo Creek No. 2	Timber Truss Pile Trestle	1 at 30′ 2 at 15′	
Day Mills Bridge (Harris Cr.)	Double Rigid Frame with Floor	2 at 15′	17
Driftwood River	Steel Beam on Timber Bents	12 at 20′	Matheson-Timmins
Driftwood River N.	Steel Beam on Timber Bents	7 at 20′	Matheson-Timmins
Deer Bay Creek	Concrete Rigid Frame	1 at 45′	36
Dog River	Timber Truss Timber Beam	2 at 60′ 1 at 20′—3 at 18′	Forbes-Ware
Duchesnay Creek Extension	Concrete Beam	1 at 30′	11
Eighteen Mile Creek	Double Rigid Frame Box	2 at 15′	Burlington-Niagara Falls
Eilber Twp.	Timber Crib	1 at 24′	
Elder Mills Subway (C. P. R.)	Steel Girders, Concrete Floor	2 at 26′ 2″	27
Esson Bridge	Pile Trestle	4 at 15′	Shenstone-Carpenter
Fauquier Twp.	Timber Crib	1 at 24′	
Field Subway	Concrete Flat Slab	1 at 32′ 2″	64
Fish Creek No. 2	Concrete Rigid Frame	1 at 45′	23
Forty Mile Creek	Concrete Rigid Frame (Twin)	1 at 50′	Burlington-Niagara Falls
Golden City	Concrete Beam and Slab	2 at 26′—2 at 26′ 7″—2 at 27′	67
Granite L.	Concrete Rigid Frame	1 at 30′	11
Grimsby Beach	Concrete Rigid Frame	2 at 45′	Burlington-Niagara Falls
Gull River	Creosoted Timber Pile Trestle	5 at 15′	Dryden-Britton Twp.
Hanlan Twp.	Timber Crib	1 at 30′	
Hastie Bridge	Pile Trestle	1 at 29′—3 at 15′	Devlin-Dance
Highfield Subway	Concrete Flat Slab	2 at 28′ 5″	27

KING'S HIGHWAY DURING 1938

No. 4

Township	Lot	Con.	County or District
Usborne	8	Thames Rd	Huron
German	8 and 9	VI	Cochrane
Tudor	16	XVIII	Hastings
Jennings	1	II	Sudbury
Morson			Rainy River
Playfair	3	V and VI	Cochrane
Sarnia			Lambton
Foley Twp			Parry Sound
Saltfleet	26	B. F.	Wentworth
Saltfleet	27	B. F.	Wentworth
Osgoode	22	VI–VII	Carleton
Osgoode	43	VII	Carleton
Neelon	3	IV	Sudbury
Lindsley			Thunder Bay
Way	12	II and III	Cochrane
Way	9	II	Cochrane
Day	3	II	Algoma
Bond and Stock	1	Bdry	Cochrane
Bond and Stock	6	Bdry	Cochrane
Harvey	10	II	Peterborough
Forbes	15	I and II	Thunder Bay
Widdifield	20	IV	Nipissing
N. Grimsby	A	B. F.	Lincoln
Eilber	6 and 7	II	Cochrane
Vaughan	13 and 14	VIII	York
Dobie	10	IV and V	Rainy River
Fauquier	17 and 18	I	Cochrane
Field	14	VI	Nipissing
Blanchard	5	III	Perth
Grimsby	Town of Grimsby		Lincoln
Whitney	10	IV	Cochrane
Best			Nipissing
N. Grimsby	A	B. F.	Lincoln
Britton	6	I	Kenora
Hanlan	14	VI and VII	Cochrane
Burris	9	I	Rainy River
Etobicoke	26	II and III	York

BRIDGES COMPLETED ON THE
APPENDIX

Name	Type	Span	Road
Hutchinson Creek	Creosoted Timber Pile Trestle	1 at 29′—5 at 15′	Quibell-Clay L.
Keewatin Channel	Steel Spandrel Braced Arch	1 at 325.5′	17
	Concrete Ribbed Arch	3 at 90′—2 at 48′—1 at 77′	
	Concrete Beam	1 at 48′—1 at 30′ 3″	
Kingston Road Underpass	Concrete Rigid Frame	1 at 61′	Hy. No. 2 and Kingston Rd.
Kleinburg No. 1	Concrete Beam and Slab	2 at 64′ 4″	27
	Cantilever Ends	2 at 25′ 5″	
Kleinburg No. 2	Concrete Beam and Slab	2 at 64′ 4″	27
	Cantilever Ends	2 at 25′ 5″	
Kleinburg No. 3	Concrete Beam and Slab	2 at 64′ 4″	27
	Cantilever Ends	2 at 25′ 5″	
Lavallee River	Concrete Rigid Frame	1 at 60′	71
Lavigne Br.	Pile Trestle	17 at 15′	Verner-Lavigne
L'Escarbault Br.	Timber Truss	1 at 60′	White River
Little Current	Low Steel Truss	1 at 80′	68
Lost Creek	Pile Trestle	4 at 15′	Devlin-Dance
Lowther Twp. No. 3	Timber Crib	2 at 10′	
Maple Ave.	Concrete Rigid Frame, Cantilevered Wings	2 at 39′ 3″	Burlington-Niagara Falls
Mapleton Bridge	Concrete Rigid Frame	1 at 50′	74
McCarty Bridge	Pile Trestle	9 at 15′	Field-River Valley.
McComber Twp	Pile Trestle	3 at 20′	Beardmore-Jellicoe
McCool Br.	Pile Trestle	1 at 29′—2 at 14′—2 at 7′	Devlin-Dance
McKenzie Creek No. 3	Creosoted Pile Trestle	3 at 15′	Dinorwic—E. Southworth
McLeod Creek	Creosoted Pile Trestle	2 at 29′—2 at 15′	Dryden-S. VanHorne
Missisauga River	Concrete Rigid Frame	1 at 60′	36
Mud Creek Bridge	Concrete Rigid Frame	1 at 25′	21
Musgrove Br.	Pile Trestle	3 at 15′	Mather-Potts
Naiscoot	Low Steel Truss	1 at 90′	69
	Steel Beam	2 at 20′	
Net Lake	Steel Beams on Timber Bents	2 at 20′—1 at 40′	11
North River No. 3	Pile Trestle	2 at 15′	63
O'Brien Twp. No. 1	Pile Trestle	2 at 10′—5 at 15′	
O'Brien Twp. No. 2	Pile Trestle	9 at 10′	
Ontario St.	Concrete Rigid Frame, Cantilevered Wings	2 at 40′	Burlington-Niagara Falls
Otter Creek No. 4	Concrete Beam and Slab	1 at 80′—2 at 40′	10
	Cantilevered Ends	2 at 10′ 7″	
Otto Twp. Br.	Timber Trestle	6 at 15′	
Papineau Creek	Concrete Arch	1 at 40′	62
Patton St.	Concrete Rigid Frame, Cantilevered Wings	2 at 46′ 7″	Burlington-Niagara Falls
Pelican R. No. 2	Pile Trestle	10 at 15′	Hy. 17 to Rugby Twp.
St. Davids Subway (C. N. R.)	Concrete Flat Slab	2 at 26′	Burlington-Niagara Falls
St. Onges Br.	Timber Truss	1 at 45′	Casey-Brethour
	Pile Trustle	2 at 15′	
Serpent R. Ext.	Concrete Rigid Frame	1 at 30′	17
Sioux Lookout Br.	Steel Through Truss on Concrete Piers	2 at 132′—1 at 30′ 1 at 45′	72
Songis Br.	Pile Trestle	4 at 15′	North Bay-Songis.

KING'S HIGHWAY DURING 1938 (CONTINUED

No. 4

Township	Lot	Con.	County or District
Wabigoon	8 and 9	VI	Kenora
Towns of Kenora and Keewatin			Kenora
Scarborough			York
Vaughan	18	VIII	York
Vaughan	20	VIII	York
Vaughan	24	VIII	York
Devlin	Sect. 22 and 27		Rainy River
MacPherson	1	III	Nipissing
169			Algoma
			Manitoulin
Dance	8 and 9	III	Rainy River
Lowther	22	VIII and IX	Cochrane
Grimsby	Town of Grimsby		Lincoln
Yarmouth	1	N. E. R.	Elgin
Gibbons	12	III	Nipissing
McComber			Thunder Bay
Burris	8 and 9	II	Rainy River
Southworth	6	V	Kenora
VanHorne	9	III	Kenora
Harvey	11	VIII	Peterborough
Bosanquet	52	Lake Rd. E	Lambton
Mather	8 and 9	VI	Rainy River
Wallbridge			Parry Sound
Strathy			Nipissing
Phelps	15	III	Nipissing
O'Brien	6 and 7	VIII	Cochrane
O'Brien	12 and 13	XIII	Cochrane
Grimsby	Town of Grimsby		Lincoln
Bayham	Vienna Village		Elgin
Otto	4 and 5	V	Timiskaming
Monteagle	15	XVI	Hastings
Grimsby	Town of Grimsby		Lincoln
Rugby	7	I	Kenora
Stamford	8	I	Welland
Casey	6 and 7	III	Timiskaming
Lewis	8	II	Algoma
Drayton			Kenora
Phelps	11	I	Nipissing

BRIDGES COMPLETED ON THE APPENDIX

Name	Type	Span	Road
Strathroy	Through Steel Truss	1 at 98′	22
Sunshine Creek	Timber Truss, Creosoted Pile Bents	1 at 40′—2 at 5′ 1 at 16′—1 at 12′	Ellis-Finmark
Tank Creek	Concrete Rigid Frame	1 at 45′	17
Tetrault Br.	Pile Trestle	4 at 15′	Dilke-Sutherland
Tweed	Through Steel Truss	3 at 101′ 6″	37
Union Creek Ext.	Rigid Frame Culvert	1 at 20′	Fenelon Falls-Burnt River Rd.
Unionville	Concrete Rigid Frame	2 at 40′	7
Watabeag R.	Steel Deck Truss	1 at 90′	Matheson-Timmins
	Steel Beam Span	2 at 40′	
Walters Twp.	Creosoted Pile Trestle	3 at 20′	Beardmore-Jellicoe
Burk's Falls	Through Steel Truss	2 at 114′ 4″	11
	Conc. Beam Appr.	3 at 36′ 0″	
Browns Creek	Conc. Rigid Frame	1 at 60′ 0″	79
Cameron Bay	Through Timber Truss	2 at 135′ 0″	17
	Timber Beam Appr.	3 at 29′ 0″	
Commanda Overhead	Conc. Beam and Slab	2 at 43′ 0″ 9 at 20′ 0″	17
Huntsville	Low Steel Truss (Swing)	1 at 168′ 0″	11
	Conc. R. F. Appr.	1 at 45′ 0″	

KING'S HIGHWAY DURING 1938 (CONTINUED)

No. 4

Township	Lot	Con.	County or District
Adelaide	21	IV	Middlesex
Dawson Road Lots	24	I and II	Thunder Bay
Hagar	14	III	Sudbury
Nelles and Puttulo	Sect. 25 and 30		Rainy River
Hungerford	Tweed Village		Hastings
Somerville	5	VI	Victoria
Markham	10	VI	York
Carr and Bowman	11	Bdry	Cochrane
McComber			Thunder Bay
Armour			Parry Sound
Brooke	18	XI	Lambton
Town of Kenora			Kenora
Commanda	1	B	Nipissing
Town of Huntsville			Muskoka

APPENDIX No. 5

GROWTH OF COUNTY ROAD EXPENDITURES AND PROVINCIAL GRANTS

Year Work Was Done	Number of Counties	Expenditure	Government Grants
1903	4	$ 166,149.06	$ 55,383.02
1904	7	291,085.42	97,028.48
1905	6	179,593.62	59,864.53
1906	8	247,102.37	82,367.45
1907	14	383,518.86	127,839.62
1908	15	429,393.57	143,131.16
1909	16	440,374.08	146,791.36
1910	17	553,312.61	184,437.54
1911	19	712,072.52	237,357.50
1912	20	898,631.18	299,543.69
1913	20	847,684.15	282,561.35
1914	20	785,521.93	261,840.61
1915	20	811,540.05	270,513.34
1916	21	955,447.19	327,663.76
1917	30	1,388,341.87	483,621.32
1918	36	2,226,899.70	815,440.01
1919	37	5,714,937.19	2,623,719.24
1920	..	7,956,863.72	3,626,418.08
1921	..	11,078,288.39	5,119,882.26
1922	..	9,162,491.79	4,258,339.83
1923	..	7,403,509.96	3,418,523.07
1924	..	6,861,451.62	3,214,321.50
1925	..	6,608,431.04	3,222,678.10
1926	..	5,838,445.12	2,913,660.96
1927	..	7,424,464.85	3,706,719.88
1928	..	8,784,420.42	4,360,222.86
1929	..	9,212,758.04	4,591,110.16
1930	..	8,929,424.27	4,463,527.11
1931	..	7,265,350.65	3,625,860.66
1932	..	4,214,410.70	2,106,457.18
1933	..	3,058,622.91	1,529,228.37
1934	..	3,391,768.96	1,695,291.35
1935	..	3,107,215.32	1,553,273.39
1936	..	3,438,188.53	1,718,944.63
1937	..	4,062,753.39	2,031,372.49
1938	..	4,686,333.38	2,342,971.65
Totals to Date		$ 139,516,798.43	$ 65 997,907.51

APPENDIX No. 6

COUNTY ROAD MILEAGE AND EXPENDITURE

From Inception of County Road Systems to December 31st, 1938 ⅝ Provincial Subsidies on 1938 Expenditures Being Paid in 1939

County	Year of Establishment of System	Road Mileages			Total Approved Expenditure to end of 1938	Total Government Grant
		County Roads	County Suburban Roads	Total		
Brant	1917	61.0	22.4	83.4	$ 2,550,607.49	$1,267,069.59
Bruce	1917	244.7	....	244.7	3,605,580.11	1,792,769.31
Carleton	1910	144.4	89.6	234.0	7,143,677.05	3,364,760.83
Dufferin	1918	139.6	....	139.6	1,471,029.57	698,547.70
Elgin	1917	193.2	18.3	211.5	2,683,278.80	1,265,925.02
Essex	1916	199.4	37.5	236.9	6,305,439.41	3,097,107.96
Frontenac	1907	131.4	28.5	159.9	1,706,258.48	787,120.23
Grey	1918	268.9	32.4	301.3	3,620,675.47	1,787,460.88
Haldimand	1912	149.2	....	149.2	2,779,852.53	1,288,585.86
Halton	1907	137.0	....	137.0	2,448,759.85	1,128,434.52
Hastings	1904	276.0	....	276.0	3,566,187.85	1,655,953.37
Huron	1917	369.8	....	369.8	3,089,302.30	1,481,385.90
Kent	1917	285.1	9.5	294.6	5,000,664.72	2,496,664.09
Lambton	1918	208.0	14.5	222.5	2,771,739.08	1,336,871.95
Lanark	1903	230.4	....	230.4	2,905,532.90	1,374,852.71
Leeds and Grenville	1910	237.5	11.4	248.9	3,901,508.74	1,804,047.04
Lennox and Addington	1906	123.5	....	123.5	2,725,023.33	1,317,187.36
Lincoln	1904	134.1	12.3	146.4	4,334,347.24	1,903,986.78
Middlesex	1906	429.9	41.0	470.9	4,519,186.06	2,075,282.85
Norfolk	1917	199.8	....	199.8	3,674,344.05	1,751,498.83
Northumberland and Durham	1918	211.6	....	211.6	3,276,655.30	1,610,041.93
Ontario	1918	171.2	13.5	184.7	2,255,442.91	1,094,087.41
Oxford	1904–7	170.4	4.0	174.4	3,164,828.73	1,409,716.09
Peel	1907	116.8	....	116.8	2,707,249.64	1,215,506.89
Perth	1907	164.7	7.5	172.2	1,846,606.82	838,343.53
Peterboro	1919	123.9	58.3	182.2	1,260,244.25	605,481.76
Prescott and Russell	1917	275.1	....	275.1	4,478,300.21	2,011,704.02
Prince Edward	1907	165.8	....	165.8	2,169,572.14	995,808.26
Renfrew	1918	200.1	....	200.1	3,302,960.82	1,607,684.53
Simcoe	1903	264.9	....	264.9	4,308,273.19	1,998,774.25
Stormont, Dundas and Glengarry	1917	463.3	....	463.3	5,812,358.62	2,832,657.18
Victoria	1917	169.1	....	169.1	2,742,196.02	1,360,112.25
Waterloo	1908	131.4	15.2	146.6	4,214,079.06	2,060,440.63
Welland	1912	107.2	16.4	123.6	4,891,341.26	2,266,318.86
Wellington	1903	310.9	23.5	334.4	3,992,023.23	1,869,412.28
Wentworth	1903	93.6	55.5	149.1	4,516,244.93	2,073,486.61
York	1911	89.8	241.2	331.0	13,775,426.27	6,472,818.25
Totals		7392.7	752.5	8145.2	$139,516,798.43	$65,997,907.51

APPENDIX No. 7
SUMMARY, 1938 — WORK DONE ON COUNTY ROADS

Name of County	Miles of Road Surfaced					New Bridges	Pipe and Tile Culverts	Arch and Concrete Culverts
	Gravel or Stone	Surface Treated Gravel or Stone	Low-Cost Bituminous Surfaces	Mixed Macadam or Asphaltic Concrete	Cement Concrete			
Brant	......	......	1.25	1.00	......	......	18	......
Bruce	......	......	8.00	.75	......	2	19	4
Carleton	5.50	8.20	4.28	.81	......	1	46	......
Dufferin	2.00	1.25	......	......	......	1	11	1
Elgin	2.00	......	.50	......	......	2	15	2
Essex	2.50	......	3.80	......	......	3	25	1
Frontenac	2.30	......	......	5.00	......	......	20	......
Grey	10.00	5.50	2.00	......	......	3	5	2
Haldimand	1.40	.80	......	......	......	2	21	5
Halton	4.00	......	4.17	......	......	1	24	3
Hastings	.75	2.00	1.50	......	......	......	45	1
Huron	3.00	......	......	......	......	2	20	1
Kent	15.00	......	24.50	......	1.50	1	21	......
Lambton	6.25	.20	2.60	......	......	......	33	......
Lanark	2.00	......	1.00	......	......	2	58	......
Leeds and Grenville	1.00	......	5.75	6.75	......	......	34	8
Lennox and Addington	......	......	......	0.10	......	......	10	......
Lincoln	......	......	8.00	......	......	1	9	3
Middlesex	9.10	1.00	1.60	......	......	9	79	4
Norfolk	5.80	......	10.55	......	......	......	99	......
Northumberland and Durham	5.50	......	......	......	......	......	35	3
Ontario	6.00	......	5.25	......	......	......	56	......
Oxford	9.90	......	......	......	......	6	85	2
Peel	......	......	......	......	......	1	31	6
Perth	7.50	12.00	2.25	......	......	......	11	......
Peterboro	5.70	......	2.70	......	......	......	43	5
Prescott and Russell	3.75	......	......	......	......	2	9	......
Prince Edward	4.20	19.00	3.10	......	......	......	25	......
Renfrew	5.44	......	......	......	......	......	36	......
Simcoe	7.80	......	......	......	......	1	89	3
Stormont, Dundas and Glengarry	4.00	......	14.00	......	......	......	8	......
Victoria	6.20	......	2.00	......	......	......	25	......
Waterloo	5.00	......	......	......	......	2	56	3
Welland	......	......	1.10	......	......	1	34	1
Wellington	32.00	......	......	......	......	......	201	......
Wentworth	1.25	2.70	6.80	......	......	......	23	4
York	9.46	......	2.83	5.53	......	3	202	11
Totals	186.30	52.65	119.53	19.94	1.50	46	1581	73

SUMMARY OF COUNTY
APPENDIX

Name of County	Road and Culvert Construction	Bridge Construction	Maintenance and Repair	Machinery		Urban Improvement		County Bridges	
				Construction	Maintenance	Construction	Maintenance	Construction	Maintenance
Brant	$ 44,711.75		$ 21,979.73	$ 624.65	$ 7,577.20				$ 184.85
Bruce	81,516.15	5,649.50	54,511.71	17,424.80	7,144.75	2,541.58	4,380.39	1,099.70	1,115.81
Carleton	122,971.52	183.81	51,155.54	970.00	6,464.82		1,000.31		269.12
Dufferin	14,079.17	4,985.50	18,677.75	466.26	534.19		318.99		
Elgin	31,106.88	10,826.32	41,571.97	4,645.58	6,461.32	1,304.53	91.05	921.92	
Essex	39,053.96	12,099.64	34,741.51	194.80	542.50	600.00	729.70		675.90
Frontenac	27,336.40		29,312.75	3,195.50	2,021.63				
Grey	37,276.90	18,031.20	77,705.99	13,796.62	2,992.62	2,122.55	1,678.83		238.02
Haldimand	28,112.18	7,255.72	52,833.51	8,052.34	245.03		4,365.00	1,037.60	436.41
Halton	49,206.25	2,584.18	29,167.31	6,778.08	1,645.11		3,242.82		
Hastings	36,207.65		29,526.32	100.50	2,917.07		1,766.41		560.72
Huron	63,972.02	2,398.13	55,915.55	8,833.07	9,625.75		7,755.91		12.65
Kent	137,708.37	2,726.31	132,389.18	884.91	6,399.81	6,331.81	9,997.12		
Lambton	27,753.85	387.55	27,765.85	5,272.16	2,639.63				
Lanark	20,503.28	7,022.89	25,852.71	582.50	6,371.38				
Leeds and Grenville	78,178.75		39,571.73	4,777.66	354.59	2,984.52			
Lennox and Addington	18,334.21		10,860.83	2,359.43	3,223.14	929.83	163.19		
Lincoln	27,501.59	6,126.79	35,868.59	4,551.32	2,839.64	5,045.33	5,243.35		296.82
Middlesex	26,948.87	24,760.10	48,937.21	3,792.68	17,753.70			1,127.81	233.81
Norfolk	90,445.57		69,231.99	11,467.00	8,399.88	15,364.89			634.25
Northumberland and Durham	22,852.44		30,503.13	13,628.28	3,446.65		1,078.14		1,362.49
Ontario	41,000.64		35,801.81	4,577.81	5,215.45	5,243.43			422.97
Oxford	26,664.32	20,125.64	63,877.17	4,381.00	5,996.50			2,714.50	
Peel	10,004.04		50,569.03	300.35	1,370.92	1,967.82		1,153.53	592.55
Perth	48,092.04	71.20	14,882.45		4,998.01		1,521.24		485.77
Peterborough	42,269.63		21,065.63	7,389.20	3,838.16		1,394.92		5,248.61
Prescott À Russell	7,965.51	24,275.94	60,366.59	83.90	229.28		1,418.00		
Prince Edward	25,756.96	145.94	29,770.04	2,500.15	1,958.34	3,471.19			
Renfrew	27,099.43	1,288.81	36,587.52	1,474.32	1,682.71				132.68
Simcoe	14,645.93	2,146.28	62,053.04	14,203.35	4,748.84	14,815.85			141 28
Stormont, Dundas and Glengarry	65,231.24		106,706.78	13,230.33	4,777.67	11,810.00			
Victoria	30,745.38		31,354.90	5,786.00	3,065.73	5,318.79	6,781.38		615.84
Waterloo	56,658.30	3,356.81	50,764.32	13,260.63	3,243.34		16,809.10		77.81
Welland	23,829.47	548.65	53,989.23	3,150.30	800.15	1,642.12			1,575.01
Wellington	65,172.02		50,526.41	4,619.00	3,607.95		10,139.95		
Wentworth	85,866.32		53,421.12	4,101.54	7,646.74		2,783.35		61.67
York	230,973.68	48,123.56	265,500.20	6,273.27	8,293.25	26,343.22		1,259.54(4	0%) 690.47
Totals	$ 1,827,752.67	$205,120.47	$ 1,905,317.10	$197,729.29	$161,073.45	$107,837.46	$ 82,659.15	$ 9,314.60	$ 16,065.51

ROAD EXPENDITURES—1938

No. 8

Superintendence		Total Approved Expenditure			Government Subsidy — 50%		
Construction	Maintenance	Construction	Maintenance	Total	Construction	Maintenance	Total
$ 2,319.00	$ 1,529.29	$ 47,655.40	$ 31,271.07	$ 78,926.47	$ 23,827.70	$ 15,635.53	$ 39,463.23
2,615.61	2,000.00	110,847.34	69,152.66	180,000.00	55,423.67	34,576.33	90,000.00
6,000.00	3,278.95	130,125.33	62,168.74	192,294.07	65,062.67	31,084.37	96,147.04
1,468.43	1,468.43	20,999.36	20,999.36	41,998.72	10,499.68	10,499.68	20,999.36
1,824.71	2,000.00	50,629.94	50,124.34	100,754.28	25,314.97	25 062.17	50,377.14
2,000.00	1,333.10	53,948.40	38,022.71	91,971.11	26,974.20	19,011.35	45,985.55
2,346.89	1,544.41	32,878.79	32,878.79	65,757.58	16,439.40	16,439.39	32,878.79
1,635.00	2,962.35	72,862.27	85,577.81	158,440.08	36,431.14	42,788.90	79,220.04
2,470.00	3,217.64	46,927.84	61,097.59	108,025.43	23,463.92	30,548.79	54,012 71
1,850.00	1,073.25	60,418.51	35,128.49	95,547.00	30,209.25	17,564.25	47,773.50
1,960.66	1,960.67	38,268.81	36,731.19	75,000.00	19,134.40	18,365.60	37,500.00
2,322.00	2,260.67	77,525.22	75,570.53	153,095.75	38,762.60	37,785.28	76,547.88
3,601.58	1,000.00	151,252.98	149,786.11	301,039.09	75,626.49	74,893.05	150,519.54
2,100.00	1,843.44	35,513.56	32,248.92	67,762.48	17,756.78	16,124.46	33,881.24
1,860.15	1,860.16	29,968.82	34,084.25	64,053.07	14,984.41	17,042.13	32,026.54
2,261.04	2,000.00	88,201.97	41,926.32	130,128.29	44,100.99	20,963.15	65,064.14
2,000.00	2,724.20	23,623.47	16,971.36	40,594.83	11,811.74	8,485.67	20,297.41
2,454.55	2,479.00	45,679.58	46,727.40	92,406.98	22,839.79	23,363.70	46,203.49
3,000.00	3,440.82	59,629.46	70,365.54	129,995.00	29,814.73	35,182.77	64,997.50
3,000.00	2,122.02	120,277.46	80,388.14	200,665.60	60,138.73	40,194.07	100,332.80
2,041.21	2,041.20	38,521.93	38,431.61	76,953.54	19,260.97	19,215.80	38,476.77
3,110.00	2,529.46	53,931.88	43,969.69	97,901.57	26,965.94	21,984.84	48,950.78
2,000.00	2,946.82	55,885.46	72,820.49	128,705.95	27,942.73	36,410.24	64,352 97
705.00	2,765.07	14,130.74	55,297.57	69,428.31	7,065.37	27,648.78	34,714 15
2,397.40	1,027.43	50,560.64	22,914.90	73,475.54	25,280.32	11,457.45	36,737.77
2,059.35	1,734.50	51,718.18	33,281.82	85,000.00	25,859.09	16,640.91	42,500.00
1,350.00	1,339.63	33,675.35	63,353.50	97,028.85	16,837.67	31,676.75	48,514 42
1,196.30	1,196.30	33,070.54	32,924.68	65,995.22	16,535.27	16,462.34	32,997.61
2,128.70	2,695.92	31,991.26	41,098.83	73,090.09	15,995.63	20,549.42	36,545.05
1,618.87	2,375.00	47,430.28	69,318.16	116,748.44	23,715.14	34,659.08	58,374 22
2,716.62	2,700.00	92,988.19	114,184.45	207,172.64	46,494.09	57,092.23	103,586.32
2,314.56	2,314.55	44,164.73	44,132.40	88,297.13	22,082.36	22,066.20	44,148 56
3,586.08	3,186.08	76,861.82	74,080.65	150,942 47	38,430.91	37,040.33	75,471 24
1,419.00	2,744.39	30,589.54	59,108.78	89,698.32	15,294.77	29,554.39	44,849 16
2,442.00	2,419.89	72,233.02	66,694.20	138,927.22	36,116.51	33,347.10	69,463 61
4,464.51	3,167.00	94,432.37	67,079.88	161,512.25	47,216.18	33,539.94	80,756 12
5,080.00	4,462.82	318,053.27	278,946.74	597,000.01	158,900.67	139,404.33	298,305.00
$ 89,719.22	$ 83,744.46	$ 2,437,473.71	$ 2,248,859.67	$ 4,686,333.38	$ 1,218,610.88	$ 1,124,360.77	$ 2,342,971.65

APPENDIX

SUMMARY — SCHEDULE OF EXPENDITURE ON

Name of County	Brushing and Weed Cutting	Ditching	Grading	Dragging
Brant	$ 1,720.67	$ 611.57	$ 341.40	$ 2,145.89
Bruce	4,690.33	552.15	2,659.66	7,046.04
Carleton	5,557.62	739.60	1,768.32	4,659.46
Dufferin	1,897.34	55.85	462.05	3,524.94
Elgin	2,317.67	1,632.30	3,683.53	5,011.29
Essex	3,587.44	5,531.85	642.75	6,456.29
Frontenac	3,176.98	1,143.05	7,519.30	1,431.78
Grey	3,350.94	1,526.31	1,883.10	6,385.11
Haldimand	3,894.76	836.65	605.72	2,211.84
Halton	831.12	1,701.97	131.34	4,426.02
Hastings	2,572.09	920.44	2,002.25	4,862.93
Huron	8,577.00	2,565.77	1,018.34	8,937.98
Kent	4,040.72	6,155.64	2,800.39	19,128.23
Lambton	2,631.43	2,431.45	35.08	8,257.44
Lanark	1,298.03	1,039.40	2,691.06	518.48
Leeds and Grenville	1,756.96	234.40	1,015.59	4,270.08
Lennox and Addington	2,212.70	246.85	1,033.52	3.20
Lincoln	3,613.36	1,293.33	542.38	122.90
Middlesex	6,759.05	1,462.27	5,196.85	8,925.22
Norfolk	1,926.52	2,403.83	3,121.64	3,715.60
N. & D.	3,627.75	720.68	962.30	1,364.80
Ontario	1,830.58	762.64	1,398.74	2,047.00
Oxford	3,087.35	589.06	710.18	8,807.00
Peel	1,526.56	959.80	570.21	2,631.06
Perth	2,662.80	725.09	4,882.43	981.73
Peterboro	1,047.75	35.00	816.60	5,037.05
Prescott and Russell	3,259.97	2,738.06	8,213.76	871.91
Prince Edward	1,166.28	179.13	5,329.79	627.54
Renfrew	1,510.55	540.01	4,848.37	951.14
Simcoe	2,735.06	574.35	224.22	10,028.82
S. D. & G.	3,746.12	490.80	5,060.46	....
Victoria	1,335.24	250.51	290.45	3,984.67
Waterloo	2,049.31	681.13	....	4,120.35
Welland	4,053.77	1,438.03	4,026.93	....
Wellington	2,239.64	864.13	625.70	6,049 90
Wentworth	4,865.30	4,836.95	4,251.32	3,344.27
York	13,426.87	7,512.00	9,431.55	6,201.81
Totals	$120,583.63	$ 56,982.05	$ 90,797.28	$ 159,089.77

No. 9 — 1938
MAINTENANCE AND REPAIR OF COUNTY ROADS

Culverts (Repairs Only)	Bridges (Repairs Only)	Re-Surfacing	Stabilizing Oiling, Etc.	Snow Roads	Wire Fence Bonus and Guide Rail	Total Subsidisable Expenditure
$ 226.01	$ 6,237.88	$ 7,097.90	....	$ 2,099.11	$ 1,499.30	$ 21,979.73
166.03	233.61	16,496.55	$ 13,485.92	9,181.42	....	54,511.71
1,605.56	849.85	13,994.88	8,750.24	11,732.39	1,497.62	51,155.54
12.45	56.24	3,664.91	4,264.78	4,730.23	8.96	18,677.75
749.45	3,469.36	9,487.14	12,474.94	1,091.67	1,654.62	41,571.97
102.80	329.17	7,681.98	9,958.32	169.45	281.46	34,741.51
1,020.60	25.00	5,176.90	1,697.80	7,757.70	363.64	29,312.75
354.90	219.54	36,880.92	19,833.18	4,303.78	2,968.21	77,705.99
558.00	1,259.46	35,675.52	3,296.20	2,526.32	1,969.04	52,833.51
892.72	203.37	20,877.26	103.51	....	....	29,167.31
961.05	750.07	....	8,823.24	7,279.32	1,354.93	29,526.32
1,578.64	422.20	13,167.80	9,435.75	9,741.76	470.31	55,915.55
385.28	4,528.40	91,132.80	2,000.28	443.45	1,773.99	132,389.18
517.96	8.46	11,497.30	352.03	1,764.21	270.49	27,765.85
1,032.49	836.57	16,382.13	....	1,576.08	478.47	25,852.71
1,079.92	360.25	23,296.15	2,877.01	3,832.69	848.68	39,571.73
88.36	170.16	280.98	1,362.65	4,350.79	1,111.62	10,860.83
213.86	164.33	26,519.74	....	3,312.39	86.30	35,868.59
898.99	1,046.43	12,175.80	4,252.95	8,088.05	131.60	48,937.21
1,383.17	1,786.71	51,034.92	1,660.62	1,741.75	457.23	69,231.99
542.96	94.18	7,379.30	9,035.60	6,364.20	411.36	30,503.13
518.97	279.34	14,716.48	5,470.07	8,363.42	414.57	35,801.81
859.74	20.70	25,972.09	18,037.17	5,026.69	767.19	63,877.17
257.15	405.61	25,789.09	12,965.95	3,785.85	1,677.75	50,569.03
134.34	84.17	2,103.94	....	3,202.53	105.42	14,882.45
301.93	....	6,259.62	3,163.25	3,737.27	667.16	21,065.63
680.12	1,535.32	39,281.89	....	3,785.56	....	60,366.59
2,289.24	316.05	12,200.83	....	5,536.19	2,124.99	29,770.04
2,646.56	647.78	10,883.01	11,652.09	2,908.01	....	36,587.52
1,899.06	394.60	29,241.56	6,465.55	9,139.92	1,349.90	62,053.04
3,552 00	319.03	60,672.64	24,810.58	8,055.15		105,705.78
302.34	8.70	17,244.03	1,030.01	6,095.53	813.42	31,354.90
326.76	168.79	21,867.64	14,843.28	5,999.30	707.76	50,764.32
793.08	38.11	28,429.46	11,746.91	2,994.07	468.87	53,989.23
1,157.30	528.65	21,767.69	8,848.41	7,125.19	1,319.80	50,526.41
311.39	....	25,588.40	6,090.97	4,132.52	.	53,421.12
48.18	. . . .	173,044.09	26,028.89	29,806.81		265,500.20
$30,449.36	$27,798.09	$924,963.34	$264,818.15	$201,780.77	$28,054.66	$1,905,317 10

APPENDIX

SUMMARY OF EXPENDITURE

The following schedule shows the approved expenditure on township

Year	No. of Twps.	Roads and Culverts	Bridges	General Maintenance	Machinery	Superintendence
1920 to 1934	172 to 338	$ 17,415,367.95	$ 4,637,929.24	$ 30,941,679.92	$ 2,323,851.88	$ 2,671,828.52
1935	339	628,855.34	98,623.04	1,844,654.47	127,708.09	214,688.40
1936	343	462,196.19	103,438.46	1,989,872.85	166,772.95	225,333.70
1937	344	823,923.53	190,891.00	2,307,548.05	256,742.36	243,315.59
1938	559	1,066,649.91	170,301.02	2,865,605.17	378,196.85	310,330.40
Totals		$ 20,396,992.92	$ 5,201,182.76	$ 39,949,360.46	$ 3,253,272.13	$ 3,665,496.61

No. 10

ON TOWNSHIP ROADS

roads under the provisions of The Highway Improvement Act.

Total Approved Expenditure			Government Subsidy		
Construction	Maintenance	Total	Construction	Maintenance	Total
$23,718,523.99	$ 34,272,133.52	$ 57,990,657.51	$ 7,615,854.36	$ 10,959,400.20	$ 18,575,254.56
824,447.33	2,090,082.01	2,914,529.34	344,705.13	874,448.05	1,219,153.18
699,695.53	2,247,918.62	2,947,614.15	293,505.92	939,468.25	1,232,974.17
1,234,367.12	2,588,053.41	3,822,420.53	623,824.61	1,301,050.22	1,924,874.83
1,578,956.62	3,212,126.73	4,791,083.35	827,188.62	1,707,554.52	2,534,743.14
$28,055,990.59	$ 44,410,314.29	$ 72,466,304.88	$ 9,705,078.64	$ 15,781,921.24	$ 25,486,999.88

APPENDIX
MILEAGE OF ROAD SURFACES

County	Earth	Gravel or Stone	COUNTY ROADS			
			Surface Treated Gravel or Stone	Low-cost Bituminous Surfaces	Mix. Mac. or Asp. Con.	Cement Concrete
Brant	2.3	62.4	1.2	11.4	5.1	1.0
Bruce	....	209.7	1.7	31.5	0.5	1.3
Carleton	14.4	110.5	23.1	27.7	58.3	....
Dufferin	....	138.5	....	....	....	1.1
Elgin	....	210.3	....	1.0	....	0.2
Essex	....	159.6	....	23.3	5.1	48.9
Frontenac	....	101.7	41.0	4.5	12.7	....
Grey	....	269.9	....	24.9	0.7	5.8
Haldimand	6.9	75.6	61.5	....	5.2	....
Halton	....	102.9	....	12.8	....	21.3
Hastings	....	256.3	2.5	4.0	11.0	2.2
Huron	....	330.7	2.8	35.8	....	0.5
Kent	....	228.2	6.0	39.0	3.4	18.0
Lambton	....	204.6	....	13.1	2.2	2.6
Lanark	8.8	173.4	16.0	15.8	16.4	....
Leeds and Grenville	30.7	119.6	24.0	35.0	36.9	2.7
Lennox and Addington	....	66.5	13.7	13.3	30.0	....
Lincoln	1.6	10.1	93.5	26.1	2.9	12.2
Middlesex	....	431.0	1.1	....	....	38.8
Norfolk	4.8	72.0	59.9	61.9	....	1.2
Northumberland and Durham	....	175.1	....	7.1	29.4	....
Ontario	....	163.7	....	16.2	....	4.8
Oxford	....	164.1	1.8	8.5	....	....
Peel	....	98.6	....	4.8	10.6	2.8
Perth	....	137.0	31.9	3.3	....	....
Peterborough	....	173.0	....	9.2	....	....
P. & R.	26.7	141.6	88.4	....	18.4	....
Prince Edward	....	89.3	44.3	12.8	10.2	9.2
Renfrew	29.1	128.3	42.2	.5	....	....
Simcoe	....	263.1	....	1.8	....	....
S., D. & G.	5.0	229.5	142.6	85.0	....	1.2
Victoria	....	155.2	....	11.2	2.7	....
Waterloo	....	91.5	2.8	25.9	....	26.4
Welland	1.6	2.2	73.5	22.4	13.6	10.3
Wellington	1.0	305.2	3.7	8.8	1.3	14.4
Wentworth	1.0	64.4	45.3	32.1	3.4	2.9
York	43.6	61.2	78.8	64.3	69.7	13.4
Total — County Area	177.5	5776.5	903.3	695.0	349.7	243.2
Organized — Township Roads in Districts	....	....	....	....	....	....
GRAND TOTALS	177.5	5776.5	903.3	695.0	349.7	243.2

No. 11

AT END OF 1938

Total	ORGANIZED — TOWNSHIP ROADS						
	Earth	Gravel or Stone	Surface Treated Gravel or Stone	Low-cost Bituminous Surfaces	Mix. Max. or Asp. Con.	Cement Concrete	Total
83.4	141.7	420.4	....	....	....	....	562.1
244.7	249.0	1363.0	....	....	....	....	1612.0
234.0	346.2	720.1	4.5	....	....	....	1070.8
139.6	177.0	606.3	....	....	....	....	783.3
211.5	158.5	760.1	....	....	....	....	918.6
236.9	128.3	781.7	....	....	....	35.3	945.3
159.9	499.3	455.4	....	1.0	....	....	955.7
301.3	482.0	1634.0	....	....	....	....	2116.0
149.2	169.8	426.0	8.0	....	....	3.9	607.7
137.0	39.0	395.7	....	....	....	1.2	435.9
276.0	443.0	1360.0	....	....	....	....	1803.0
369.8	222.0	1342.2	....	....	0.7	....	1564.9
294.6	263.5	1069.4	....	0.4	....	....	1333.3
222.5	370.9	1069.3	2.0	0.3	....	....	1442.5
230.4	562.9	421.6	....	....	....	....	984.5
248.9	535.8	857.7	....	1.5	9.5	....	1404.5
123.5	280.2	394.8	....	0.5	....	....	675.5
146.4	301.4	359.9	5.3	....	....	3.6	670.2
470.9	226.5	130.1	....	....	....	0.2	1527.8
199.8	547.1	374.5	....	2.5	....	....	924.1
211.6	965.5	1276.1	....	....	....	....	2241.6
184.7	254.0	941.2	....	....	....	....	1195.2
174.4	74.9	982.2	2.3	1.5	....	....	1060.9
116.8	98.2	508.9	....	....	....	....	607.1
172.2	73.8	997.0	....	....	....	....	1070.8
182.2	316.7	598.9	....	0.7	....	....	916.3
275.1	720.5	239.1	....	....	....	....	959.6
165.8	19.3	363.1	....	....	....	....	382.4
200.1	1012.6	652.5	....	....	....	....	1665.1
264.9	528.0	1548.5	....	....	....	....	2076.5
463.3	572.6	748.9	....	3.8	....	4.9	1330.2
169.1	180.1	761.2	....	....	....	....	941.3
146.6	54.5	530.8	....	....	0.2	....	585.5
123.6	415.4	401.8	106.2	4.2	7.8	1.8	937.2
334.4	576.2	738.8	....	....	0.4	....	1315.4
149.1	122.2	438.9	0.8	....	....	....	561.9
331.0	526.4	1010.9	19.6	16.7	86.0	15.6	1675.2
8145.2	12655.0	28852.0	148.7	33.1	104.6	66.5	41859.9
....	1862.1	4437.9	15.2	6.6	1.5	....	6323.3
8145.2	14517.1	33289.9	163.9	39.7	106.1	66.5	48183.2

APPENDIX No. 12

WORK DONE ON TOWNSHIP ROADS — SUMMARY, 1938

County or District	Miles of Road Surfaced					New Bridges	Pipe and Tile Culvert	Other Culverts
	Gravel or Stone	Surface Treated Gravel or Stone	Low-Cost Bitu-minous Surfaces	Mixed Macadam or As-phaltic Concrete	Cement Concrete			
Brant	12.00		.05				66	
Bruce						4	59	5
Carleton	12.30					7	36	14
Dufferin						3	33	6
Elgin	1.50					2	45	
Essex	4.50					7	14	2
Frontenac							79	12
Grey	1.25					9	101	11
Haldimand	22.40					1	16	
Halton	8.76						54	2
Hastings							33	
Huron	1.55					3	51	6
Kent	18.00					3	148	1
Lambton	34.10						90	2
Lanark	9.00					1	13	13
Leeds and Grenville	3.50		.90	2.70			14	4
Lennox and Addington							14	24
Lincoln	18.75	1.06					67	1
Middlesex	4.37					3	112	1
Norfolk	2.75					2	20	
Northumberland and Durham	27.10					9	60	38
Ontario	14.50					3	72	5
Oxford	4.75		1.20			2	23	
Peel	7.96					1	50	3
Perth	0.30					2	27	8
Peterboro	4.15			0.75		1	65	4
Prescott and Russell	15.50					5	11	23
Prince Edward							3	
Renfrew	7.00					3	59	154
Simcoe	24.80					7	127	23
Stormont, Dundas and Glengarry	6.00		0.13			5	106	
Victoria	7.15					3	32	9
Waterloo	5.00					1	29	13
Welland	12.75	3.50		1.83		1	82	2
Wellington	3.25						85	12
Wentworth	17.50					2	80	4
York	9.91	2.50		0.50	0.34	6	211	3
Southern Totals	322.35	7.06	2.28	5.78	0.34	96	2187	405
Haliburton and Muskoka	0.75		2.00				1	135
Parry Sound						4	105	
Nipissing and Sudbury	1.91					4	11	33
Temiskaming and Cochrane S.	11.60					1	46	
Cochrane N.	4.75							7
Algoma and Manitoulin	4.37					3	3	42
Thunder Bay	3.00					6	11	64
Kenora	1.46						1	16
Rainy River	3.70						5	31
GRAND TOTALS	353.89	7.06	4.28	5.78	0.34	114	2370	733

Report of the Motor Vehicles Branch, 1938

To The Honourable T. B. McQuesten,
Minister of Highways.

Sir:

I have the honour to submit herewith the annual report of the Motor Vehicles Branch for the year 1938.

Appended are the following: —

(a) A detailed statement of the motor vehicle permits and drivers' licenses issued for the year 1938.

(b) A statement, duly certified by the Provincial Auditor, showing the revenue derived from all sources during the fiscal year ending March 31st, 1939.

(c) Reports detailing the activities of the Financial Responsibility and Accident Recording Divisions of the Branch during the calendar year.

As during the previous year, the figures show important increases in almost every division. Notable exceptions were revenue and accident fatalities. The latter reduction was especially gratifying in view of a very great increase in the traffic volume on our roads. The reduced revenue was, of course, the result of the lowered scale of fees which became effective with the commencement of issuance of 1938 permits.

Motor Vehicle Registrations

Once again registrations reached new record totals. Passenger car totals were almost 40,000 higher; there were 6,000 more trucks and over 5,000 more trailers. Total vehicle registrations of all types surpassed the 1937 record by more than 50,000, passing the 700,000 mark for the first time. Registrations by classes were as follows:

Automobile Permits	580,364
Commercial Permits	81,642
Convertible Permits	1,876
Trailer Permits	39,059
Motorcycle Permits	5,206

Drivers' Licenses

Almost 1,000,000 drivers' licenses were issued for the year 1938, the total of all types reaching 975,722, an increase of 75,000 over the 1937 total. There were 108,993 instruction permits issued, while 615,105 persons qualified for operators' licenses, 756 for motorcycle operators' licenses and 250,868 obtained chauffeurs' licenses.

Revenue

Adjustment of the license year to correspond with the fiscal year and a reduced scale of fees applicable throughout the entire year make effective comparison of revenue with that obtained in other years difficult. The Branch was, however, able to transmit to the Treasury a net revenue of $7,902,489.94. Total collections before deductions for commissions, refunds and adjustments amounted to $8,141,898.71.

Public Vehicles and Public Commercial Vehicles

The year was marked by an increase of almost 10% in the number of vehicles registered under Public Commercial Vehicle and Public Vehicle licenses, but the statistics indicate only the improvement in frequency of service or the extension of services by operators of vehicles for hire. To those interested in the development of highway transportation on a sound basis this increase is overshadowed by improvements in both equipment and dependability of service. Modern trucks and trailers and the newest types of passenger vehicles are rapidly replacing older equipment which cannot compete efficiently nor be made to give service meeting present-day standards.

For some time the Department has enforced the Public Vehicle Act and Commercial Vehicle Act largely through warnings and has resorted to prosecution only in cases of flagrant or persistent violations. Operators have realized that the object of the Department is to regulate and systematize, not to hamper or impede the business and as a result a splendid spirit of co-operation has been engendered. Indicative of the high standard of operations resulting from this spirit of co-operation is the fact that during the year 1938, not a single prosecution of Public Vehicle operator was necessary.

Public Vehicle registrations totalled 828, an increase of 74, while Public Commercial Vehicle registrations increased by 451 to 7,342. Revenue of this Division amounted to $407,368.16.

Financial Responsibility Division

Suspension orders made effective by this division during this year totalled 7,453, a new record. While not sufficiently prolonged to afford conclusive evidence of accomplishment, it is interesting to note that the increased activity of this division during the past two years has coincided with a lowered accident toll. At the end of 1938, there were 12,253 financial responsibility suspensions in effect.

Accident Recording Division

After a number of years in which the accident toll increased, 1938 showed a marked recession, especially with regard to fatalities. The review of the year's record, which is appended, shows 13,715 accidents reported which involved property loss estimated at $1,747,841.00, the injury of 11,683 persons and 640 deaths. The latter figure was 126 below the peak total of 1937.

All of which is respectfully submitted.

J. P. Bickell,
Registrar of Motor Vehicles.

COMPILED BY MOTOR VEHICLES BRANCH — DEPARTMENT OF HIGHWAYS

1938 STATISTICS

MOTOR VEHICLE REGISTRATIONS

Automobile Permits	580,364
Commercial Permits	81,642
Convertible Permits	1,876
Trailer Permits	39,059
Motorcycle Permits	5,206
Automobile Dealers' Permits	1,280
Motorcycle Dealers' Permits	10
Operators	615,105
Instruction Permits	108,993
Motorcycle Operators	756
Chauffeurs	250,868
In Transits	17,635
Transfers	149,075
Public Vehicles	828
Public Commercial Vehicles	7,342

PASSENGER CARS

Cylinders and Horsepower

Four Cylinders	165,197
Six Cylinders under 28 Horsepower	280,412
Six Cylinders over 28 Horsepower	44,266
Eight Cylinders under 35 Horsepower	82,711
Eight Cylinders over 35 Horsepower	6,391
Twelve Cylinders	690
Sixteen Cylinders	35
Electric	2
Steam	2
Free	658
	580,364

Registrations

Originals	48,561
Renewals	531,803
	580,364

Convertible Permits

Four Cylinders	1,285
Six Cylinders under 28 Horsepower	502
Six Cylinders over 28 Horsepower	11
Eight Cylinders under 35 Horsepower	69
Eight Cylinders over 35 Horsepower	4
Ontario Government }	
Dominion Government }	5
	1,876

COMMERCIAL CARS REGISTERED

Tires

Pneumatic	78,105
Solid and Deisel	164
Municipal	2,505
Ontario Government }	
Dominion Government }	868
	81,642

Gross Weight

		Pneumatic Tires	Solid Tires
Less than two tons		31,607	6
Of two tons and up to three tons		15,882	15
More than three tons and up to four tons		8,449	8
More than four tons and up to five tons		6,596	6
More than five tons and up to six tons		4,196	8
More than six tons and up to seven tons		3,617	13
More than seven tons and up to eight tons		4,163	22
More than eight tons and up to nine tons		1,578	6
More than nine tons and up to ten tons		1,750	51
More than ten tons and up to eleven tons		86	7
More than eleven tons and up to twelve tons		124	12
More than twelve tons and up to thirteen tons		10	3
More than thirteen tons and up to fourteen tons		11	..
More than fourteen tons and up to fifteen tons		34	9
		78,103	166
Municipal	2,505	2,505	
Ontario Government }			
Dominion Government }	868	868	81,476
			81,642

Registrations

Originals	8,949
Renewals	72,693
	81,642

Trailer Gross Weight

Of one ton or less	34,926
More than one ton and up to two tons	1,086
More than two tons and up to three tons	249
More than three tons and up to four tons	147
More than four tons and up to five tons	278
More than five tons and up to six tons	369
More than six tons and up to seven tons	470
More than seven tons and up to eight tons	1,039
More than eight tons and up to nine tons	23
More than nine tons and up to ten tons	138
More than ten tons and up to eleven tons	...
More than eleven tons and up to twelve tons	
More than twelve tons and up to thirteen tons	...
More than thirteen tons and up to fourteen tons	
More than fourteen tons and up to fifteen tons	17
Municipal	205
Free	112
	39,059

REGISTRATIONS — Continued

Cities and Counties	Pass. Cars	Comms.	Convs.	Trlrs.	Motor-cycle	"M" Dlrs.
Algoma	6,329	1,139	....	269	56	8
Brant	8,814	1,302	45	688	66	22
Bruce	8,607	701	7	931	32	10
Carleton	26,087	3,332	58	1,118	289	74
Cochrane	7,170	1,509	6	....	....	....
Dufferin	3,012	232	7	248	15	6
Dundas	3,085	270	6	194	21	4
Durham	4,847	481	40	385	33	8
Elgin	8,926	1,090	22	877	97	12
Essex	27,091	3,839	34	2,239	195	83
Frontenac	7,124	1,117	86	402	88	24
Glengarry	2,418	281	9	162	13	6
Grenville	2,964	363	26	134	19	10
Grey	9,544	960	43	636	47	11
Haldimand	5,080	609	2	618	46	11
Haliburton	848	122	2	45	2	....
Halton	5,699	880	27	440	52	10
Hastings	10,439	1,459	51	743	93	27
Huron	8,673	775	16	1,037	66	10
Kenora	2,203	796	....	96	19	13
Kent	14,265	1,930	27	1,585	95	35
Lambton	11,079	1,133	21	1,455	59	12
Lanark	5,581	543	63	368	26	8
Leeds	6,184	980	46	313	37	14
Lennox and Addington	3,414	478	9	305	17	6
Lincoln	10,365	2,131	54	734	101	19
Middlesex	23,070	2,789	96	1,918	197	37
Muskoka	3,154	629	9	165	32	8
Nipissing	3,344	744	4	144	32	6
Norfolk	7,254	1,015	43	870	49	12
Northumberland	5,151	690	23	480	49	5
Ontario	11,271	1,212	27	839	85	35
Oxford	11,119	1,413	81	1,346	116	26
Parry Sound	2,941	612	3	137	21	8
Peel	6,108	1,041	12	576	46	8
Perth	9,358	978	49	1,240	79	20
Peterborough	7,302	853	66	532	68	18
Prescott	2,208	279	10	129	23	12
Prince Edward	3,222	468	15	389	16	4
Rainy River	1,748	475	....	183	10	4
Renfrew	6,755	776	16	482	30	23
Russell	1,626	311	10	133	8	4
Simcoe	12,917	1,738	98	1,079	78	25
Stormont	5,000	573	53	305	90	14
Sudbury	8,451	1,582	1	224	97	17
Thunder Bay	7,871	1,554	16	300	97	18
Temiskaming	5,941	1,246	17	*470	*145	*48
Victoria	4,874	546	27	427	18	8
Waterloo	15,533	1,850	61	1,134	193	28
Welland	14,540	2,033	86	842	153	27
Wellington	10,296	1,113	46	873	66	28
Wentworth	31,174	4,543	73	1,590	250	58
York	147,342	21,726	227	6,040	1,567	344
Miscellaneous	946	401	....	190	7	42
Totals	580,364	81,642	1,876	39,059	5,206	1,280

* Cochrane Trailers, Motorcycles and Dealers combined with Temiskaming.

REGISTRATIONS — Continued

CITIES ONLY	Pass. Cars	Comms.	Convs.	Trlrs.	Motor-cycle	"M" Dlrs.
Belleville	2,556	463	14	157	24	10
Brantford	5,091	882	13	232	34	18
Chatham	3,591	708	11	231	29	15
Fort William	3,137	575	....	134	51	10
Galt	2,457	304	10	78	27	5
Guelph	3,231	559	7	120	27	17
Hamilton	24,504	3,500	41	1,036	209	51
Kingston	3,957	684	14	192	63	22
Kitchener	5,072	790	15	211	68	15
London	13,175	1,946	23	635	131	27
Niagara Falls	4,141	536	8	170	45	10
North Bay	1,706	349	1	60	16	4
Oshawa	4,957	502	6	348	51	30
Ottawa	19,285	2,426	17	563	218	61
Owen Sound	2,101	351	16	87	23	8
Peterborough	3,975	619	18	199	51	17
Port Arthur	2,828	486	11	105	19	5
St. Catharines	5,279	1,183	2	245	50	16
St. Thomas	2,865	375	10	126	27	8
Sarnia	3,463	491	6	175	17	9
Sault Ste. Marie	3,221	529	....	182	31	8
Stratford	2,701	341	19	158	33	11
Sudbury	4,371	766	....	103	71	17
Toronto	126,322	18,626	158	4,625	1,320	303
Welland	2,141	340	4	73	36	9
Windsor	13,395	1,959	18	636	141	75
Woodstock	2,104	352	15	103	32	9
Totals	270,926	40,642	457	10,984	2,844	790

MOTOR VEHICLE REGISTRATIONS FOR THE YEARS 1904-1938, INCLUSIVE

Year	Passenger Cars	Owned in Ontario	Others	Commercial Vehicles	Two-Purpose Vehicles	Motorcycles	Trailers	Public Vehicles		Public Commercial Vehicles	
								Oper.	Licenses	Oper.	Licenses
1904	535	....	....	....	....	....	....	....	....	....	....
1905	553	....	....	....	....	....	....	....	....	....	....
1906	1,176	517	659	....	....	....	....	....	....	....	....
1907	1,530	550	980	....	....	....	....	....	....	....	....
1908	1,754	589	1,165	....	....	....	....	....	....	....	....
1909	2,452	1,020	1,432	....	....	....	....	....	....	....	....
1910	4,230	1,977	2,253	....	....	....	....	....	....	....	....
1911	11,339	7,338	4,001	....	....	....	....	....	....	....	....
1912	16,268	11,939	4,327	....	....	1,754	....	....	....	....	....
1913	23,700	17,750	5,950	....	....	2,900	....	....	....	....	....
1914	31,724	25,308	6,415	....	....	3,633	....	....	....	....	....
1915	42,346	36,661	5,686	....	....	4,174	....	....	....	....	....
1916	51,589	50,587	1,002	2,786	....	4,287	....	....	....	....	....
1917	78,861	78,475	386	4,929	....	5,180	....	....	....	....	....
1918	101,845	101,599	246	7,529	....	5,002	....	....	....	....	....
1919	127,860	127,512	348	11,428	....	5,516	....	....	....	....	....
1920	155,861	155,519	342	16,204	....	5,496	....	....	....	....	....
1921	181,978	181,686	292	19,554	....	4,989	327	....	....	....	....
1922	210,333	210,008	325	24,164	....	4,799	463	....	....	....	....
1923	245,815	245,435	380	28,612	....	4,325	591	....	....	....	....
1924	271,341	270,876	465	31,488	....	3,941	778	50	102	....	....
1925	303,736	303,216	520	34,690	....	3,748	1,058	91	216	....	....
1926	343,992	343,586	406	39,012	....	3,345	1,398	107	384	....	....
1927	386,903	386,311	592	43,442	....	3,159	1,962	103	480	....	....
1928	429,426	428,890	536	54,714	....	3,197	3,281	104	522	367	945
1929	473,222	472,634	588	55,218	8,226	3,541	4,903	80	587	285	1,118
1930	490,906	490,270	636	61,690	5,986	3,924	7,111	95	643	372	1,155
1931	489,713	489,067	646	64,256	4,177	4,070	9,996	90	629	1,977	3,900
1932	462,923	462,598	325	61,347	3,239	4,088	12,998	100	590	1,938	3,397
1933	453,314	452,961	353	59,760	2,909	4,370	16,311	85	494	2,239	4,235
1934	470,617	470,239	378	64,436	2,724	4,468	19,871	85	513	1,942	4,086
1935	489,610	489,164	446	67,590	2,370	4,506	24,232	102	597	2,218	4,834
1936	514,211	513,952	259	70,693	....	4,553	27,930	118	695	2,987	6,231
1937	541,802	541,532	270	75,687	1,847	4,582	31,771	110	754	3,186	6,881
1938	580,364	579,418	946	81,642	1,876	5,206	39,059	124	828	3,750	7,342

MOTOR VEHICLES BRANCH

Department of Highways

Revenue for Fiscal Year 1938-1939

	Gross	Deductions	Net
Passenger Car Permits	$ 3,790,331.50	$ 102,789.55	$ 3,687,541.95
Commercial Permits	2,477,432.99	14,907.80	2,462,525.19
Two-Purpose Permits	6,587.50	308.40	6,279.10
Trailer Permits	231,120.13	7,388.95	223,731.18
Motorcycle Permits	4,790.00	609.15	4,180.85
Dealers' Permits	23,381.00	....	23,381.00
Motorcycle Dealers' Permits	30.00	....	30.00
Operators and Instruction	674,880.00	63,746.20	611,133.80
Chauffeurs	277,424.00	22,276.90	255,147.10
In Transits	8,082.00	678.55	7,403.45
Transfers	135,574.50	19,358.90	116,215.60
Public Vehicles	130,522.64	....	130,522.64
Public Commercial Vehicles	276,845.52	5,364.54	271,480.98
Duplicate Cards	10,745.00	1.50	10,743.50
Certificates and Searches	1,338.06	....	1,338.06
Fines	76,046.43	155.10	75,891.33
Lists	626.35	....	626.35
Postage	65.88	.03	65.85
Testing Safety Glass, Reflectors and Headlights	600.00	140.00	460.00
Examination Fees	15,337.00	26.00	15,311.00
Miscellaneous	138.21	1.00	137.21
	$ 8,141,898.71	$ 237,752.57	$ 7,904,146.14
Balance due from Agents	$ 1,651.20		
Less amount overcharged on passenger car	5.00	1,656.20	
	$ 8,141,898.71	$ 239,408.77	$ 7,902,489.94
Bank Interest	$ 4.75		
Cheque Stamps	.06		
1937-1938 Balances Paid	137.60		
Journal entry No. 74 (Highways Dept.)	25.00		167.41
			$ 7,902,657.35

MOTOR VEHICLES BRANCH

Department of Highways

Revenue for Fiscal Year 1938-1939

Passenger Car Permits		$ 3,790,331.50		
Commercial Permits		2,477,432.99		
Two-Purpose Permits		6,587.50		
Trailer Permits		231,120.13		
Motorcycle Permits		4,790.00		
Dealers' Permits		23,381.00		
Motorcycle Dealers' Permits		30.00		
Operators and Instruction		674,880.00		
Chauffeurs		277,424.00		
In Transits		8,082.00		
Transfers		135,574.50		
Public Vehicles		130,522.64		
Public Commercial Vehicles		276,845.52		
Duplicate Cards		10,745.00		
Certificates and Searches		1,338.06		
Fines		76,046.43		
Lists		626.35		
Postage		65.88		
Testing Safety Glass, Reflectors and Headlights		600.00		
Examination Fees		15,337.00		
Miscellaneous		138.21		
			$ 8,141,898.71	
Less: —				
Commissions deducted by Agents		$ 229,477.40		
Refunds deducted by Provincial Treasurer		3,004.60		
Balances due from Agents		1,651.20		
Amount overcharged on Passenger Car		5.00		
Journal entry re Ontario Municipal Board Fees		5,265.54		
Cheque charged back as N. S. F., Johnson Motor Sales (Transfer $5.00, Postage .03).		5.03	239,408.77	$ 7,902,489.94
Bank Interest	$ 4.75			
1937-1938 Balances paid	137.60			
Cheque Stamps	.06			
Journal Entry No. 74, Highways Dept.	25.00			167.41
				$ 7,902,657.35

MOTOR VEHICLES BRANCH

Department of Highways

Itemized Statement for Fiscal Year 1938-1939

PASSENGER CARS:—

142,996 ×	$ 2.00 (4 Cyl.)	$ 285,992.00	
1,082 ×	1.00 ½ fee	1,082.00	
275,677 ×	7.00 (6 Cyl.)	1,929,739.00	
4,497 ×	3.50 ½ fee	15,739.50	
53,137 ×	10.00	531,370.00	
1,346 ×	5.00 ½ fee	6,730.00	
89,072 ×	10.00 (8 Cyl.)	890,720.00	
1,270 ×	5.00 ½ fee	6,350.00	
6,428 ×	15.00	96,420.00	
175 ×	7.50 ½ fee	1,312.50	
770 ×	25.00 (12 Cyl.)	19,250.00	
21 ×	12.50 ½ fee	262.50	
33 ×	35.00 (16 Cyl.)	1,155.00	
3 ×	17.50 ½ fee	52.50	
2 ×	15.00 Electric	30.00	
1 ×	7.50 Steam ½ fee	7.50	
4,030 ×	1.00 New Sets	4,030.00	
111 ×	No fee New Sets		
669 ×	Free		
(581,320) ×	Balance of Fees	89.00	$ 3,790,331.50

Pneumatic Tires

COMMERCIALS:—

24,874 ×	$ 7.50	186,555.00
949 ×	3.75 ½ fee	3,558.75
6,218 ×	12.50	77,725.00
13,175 ×	18.00	237,150.00
569 ×	9.00 ½ fee	5,121.00
44 ×	4.50 ¼ fee	198.00
675 ×	27.00	18,225.00
6,837 ×	36.00	246,132.00
248 ×	18.00 ½ fee	4,464.00
24 ×	9.00 ¼ fee	216.00
6,006 ×	48.50	291,291.00
194 ×	24.25 ½ fee	4,704.50
14 ×	12.13 ¼ fee	169.82
3,847 ×	63.00	242,361.00
121 ×	31.50 ½ fee	3,811.50
5 ×	15.75 ¼ fee	78.75
3,185 ×	73.50	234,097.50
109 ×	36.75 ½ fee	4,005.75
6 ×	18.38 ¼ fee	110.28
4,075 ×	84.00	342,300.00
143 ×	42.00 ½ fee	6,006.00
5 ×	21.00 ¼ fee	105.00
1,656 ×	108.00	178,848.00
50 ×	54.00 ½ fee	2,700.00
4 ×	27.00 ¼ fee	108.00
1,747 ×	127.50	222,742.50
61 ×	63.75 ½ fee	3,888.75
4 ×	31.88 ¼ fee	127.52
9 ×	148.50	1,336.50
1 ×	74.25 ½ fee	74.25
30 ×	171.00	5,130.00
3 ×	85.50 ½ fee	256.50
10 ×	195.00	1,950.00
16 ×	220.50	3,528.00
32 ×	247.50	7,920.00
4 ×	123.75 ½ fee	495.00

Solid Tires

5 × 12.00	60.00	
13 × 24.50	318.50	
1 × 12.25 ½ fee	12.25	
4 × 45.00	180.00	
4 × 60.00	240.00	
1 × 15.00 ¼ fee	15.00	
2 × 76.50	153.00	
1 × 38.25 ½ fee	38.25	
2 × 89.00	178.00	
1 × 44.50 ½ fee	44.50	
10 × 102.00	1,020.00	
3 × 128.00	384.00	
55 × 150.00	8,250.00	
5 × 198.00	990.00	
1 × 99.00 ½ fee	99.00	
3 × 224.00	672.00	
9 × 281.00	2,529.00	
1 × 85.00 Special fee	85.00	
1 × 100.00 Special fee	100.00	
1 × 125.00 Special fee	125.00	
2,609 × 2.00 Municipal	5,218.00	
1,498 × 1.00 New Sets	1,498.00	
12 × No Fee, New Sets		
983 × Free		
Increase Capacity	46,203.12	

BUSES: —

Pneumatic Tires

1 × 7.50	7.50	
24 × 18.00	432.00	
40 × 27.00	1,080.00	
3 × 13.50 ½ fee	40.50	
81 × 41.00	3,321.00	
1 × 20.50 ½ fee	20.50	
130 × 54.00	7,020.00	
10 × 27.00 ½ fee	270.00	
238 × 63.00	14,994.00	
2 × 31.50 ½ fee	63.00	
155 × 72.00	11,160.00	
12 × 36.00 ½ fee	432.00	
21 × 87.50	1,837.50	
58 × 97.50	5,655.00	
2 × 48.75 ½ fee	97.50	
69 × 123.50	8,521.50	
6 × 61.75 ½ fee	370.50	
98 × 135.00	13,230.00	
2 × 67.50 ½ fee	135.00	

Solid Tires

6 × 78.50	471.00	
2 × 108.00	216.00	
4 × 120.00	480.00	
8 × 148.50	1,188.00	
3 × 162.00	486.00	
1 × 1.00 New Set	1.00	
(81,152)		$ 2,477,432.99

TWO-PURPOSE: —

1,184 × 2.00 (4 Cyl.)	2,368.00	
24 × 1.00 ½ fee	24.00	
469 × 7.00 (6 Cyl.)	3,283.00	
3 × 3.50 ½ fee	10.50	
15 × 10.00	150.00	

62 × 10.00 (8 Cyl.)	620.00	
2 × 5.00 ½ fee	10.00	
122 × 1.00 New Sets	122.00	
4 × Free		$ 6,587.50
(1,885)		
TRAILERS: —		
33,026 × 2.00	66,052.00	
2,157 × 1.00 ½ fee	2,157.00	
933 × 7.50	6,997.50	
66 × 3.75 ½ fee	247.50	
207 × 15.50	3,208.50	
9 × 7.75 ½ fee	69.75	
135 × 24.00	3,240.00	
8 × 12.00 ½ fee	96.00	
254 × 37.50	9,525.00	
5 × 18.75 ½ fee	93.75	
337 × 49.50	16,681.50	
10 × 24.75 ½ fee	247.50	
427 × 57.50	24,552.50	
11 × 28.75 ½ fee	316.25	
1,137 × 66.00	75,042.00	
41 × 33.00 ½ fee	1,353.00	
6 × 16.50 ¼ fee	99.00	
20 × 81.00	1,620.00	
159 × 90.00	14,310.00	
5 × 45.00 ½ fee	225.00	
16 × 157.50	2,520.00	
3 × 78.75 ½ fee	236.25	
1 × 39.38 ¼ fee	39.38	
1 × 100.00 Special fee	100.00	
1 × 125.00 Special fee	125.00	
237 × .50 New Sets	118.50	
152 × 2.00 Municipal	304.00	
124 × Free		
3 × New Sets No Fee		
(39,491)		
Increase Capacity	1,543.25	$ 231,120.13
MOTORCYCLES: —		
4,669 × 1.00	4,669.00	
225 × .50 ½ fee	112.50	
17 × .50 New Sets	8.50	
270 × Free		
1 × New Set No Fee		$ 4,790.00
(5,182)		
"M" DEALERS: —		
1,164 × 20.00	23,280.00	
6 × 10.00 ½ fee	60.00	
41 × 1.00 New Sets	41.00	
1 × Free		$ 23,381.00
(1,212)		
"MC" DEALERS: —		
10 × 3.00	30.00	$ 30.00
OPERATORS: —		
621,093 × 1.00 Operators	621,093.00	
100,894 × .50 Instruction	50,447.00	

707 ×	1.00 M. C. Operator	707.00	
7 ×	Free Operator		
(722,701)			
	Oper. Prev. Year Fees (1937)	2,611.00	
	" " " " (1936)	6.00	
	MC " " " " (1937)	16.00	
			$ 674,880.00
CHAUFFEURS: —			
20,737 ×	2.00 Originals	41,474.00	
3,912 ×	1.00 Originals ½ fee	3,912.00	
230,722 ×	1.00 Renewals	230,722.00	
2 ×	Free Original		
24 ×	Free Renewal		
(255,397)			
	Previous Year Fees (1937)	1,312.00	
	" " " (1936)	4.00	
			277,424.00
IN TRANSITS: —			
16,164 ×	.50	8,082.00	
			$ 8,082.00
TRANSFERS: —			
	(1937 Fees)		
10 ×	2.00 Passenger	20.00	
5 ×	2.00 Commercial	10.00	
	(1938–39 Fees)		
124,366 ×	1.00 Passenger	124,366.00	
10,099 ×	1.00 Commercial	10,099.00	
931 ×	.50 M. C.	465.50	
162 ×	1.00 Two-Purpose	162.00	
441 ×	1.00 Trailer	441.00	
11 ×	1.00 M. Dealer	11.00	
			$ 135,574.50
(136,025)			
PUBLIC VEHICLES			130,522.64
PUBLIC COMMERCIAL VEHICLES			276,845.52
DUPLICATE CARDS: —			
5,005 ×	.50 Pass.	2,502.50	
952 ×	.50 Commercial	476.00	
52 ×	.50 Motorcycle	26.00	
11 ×	.50 Two-Purpose	5.50	
82 ×	.50 Trailers	41.00	
1,751 ×	.50 Pass. Transfers	875.50	
186 ×	.50 Comm. Transfers	93.00	
9 ×	.50 M. C. Transfers	4.50	
5 ×	.50 Two-Purpose Transfers	2.50	
1 ×	.50 Trailers Transfers	.50	
175 ×	.50 Dlrs. Pass. Transfers	87.50	
16 ×	.50 Dlrs. Comm. Transfers	8.00	
3 ×	.50 "M" Dlrs.	1.50	
713 ×	.50 Chauffeur Orig.	356.50	
4,321 ×	.50 Chauffeur Ren.	2,160.50	
8,183 ×	.50 Operators	4,091.50	
11 ×	.50 M. C. Operators	5.50	
(21,476)			
14 ×	.50 1936	7.00	
			$ 10,745.00
SEARCHES AND CERTIFICATES: —			
1 ×	.03	.03	
4 ×	.10	.40	
1 ×	.15	.15	
1,058 ×	.25	264.50	
3 ×	.30	.90	

150 × .50		75.00	
1 × .60		.60	
1 × .62		.62	
1 × .68		.68	
1 × .70		.70	
1 × .74		.74	
73 × .75		54.75	
1 × .78		.78	
1 × .80		.80	
1 × .81		.81	
1 × .85		.85	
1 × .90		.90	
268 × 1.00		268.00	
1 × 1.20		1.20	
14 × 1.25		17.50	
5 × 1.50		7.50	
12 × 1.75		21.00	
1 × 1.90		1.90	
52 × 2.00		104.00	
5 × 2.25		11.25	
2 × 2.50		5.00	
1 × 2.75		2.75	
22 × 3.00		66.00	
2 × 3.25		6.50	
3 × 3.50		10.50	
1 × 3.75		3.75	
19 × 4.00		76.00	
1 × 4.50		4.50	
1 × 4.75		4.75	
12 × 5.00		60.00	
1 × 5.50		5.50	
9 × 6.00		54.00	
6 × 7.00		42.00	
1 × 7.75		7.75	
5 × 8.00		40.00	
2 × 9.00		18.00	
2 × 10.00		20.00	
1 × 11.00		11.00	
1 × 14.00		14.00	
1 × 15.00		15.00	
1 × 16.00		16.00	
1 × 19.50		19.50	
			$ 1,338.06
(1,753)			
FINES			76,046.43
LISTS			626.35
POSTAGE			65.88
TESTING SAFETY GLASS, REFLECTORS AND HEADLIGHTS			600.00
EXAMINATION FEES			15,337.00
MISCELLANEOUS			138.21
COMMISSIONS PAID TO AGENTS:—			
Passenger Cars	$ 101,951.05		
Commercials	13,522.80		
Two-Purpose	308.40		
Trailers	7,065.45		
Motorcycles	609.15		
Operators and Instruction	63,729.70		
Chauffeurs	22,271.90		
In Transits	671.05		
Transfers	19,347.90		
		$ 229,477.40	

REFUNDS:—			
Passenger Cars	838.50		
Commercials	1,385.00		
Trailers	323.50		
Operators and Instruction	16.50		
Chauffeurs	5.00		
In Transits	7.50		
Transfers	6.00		
Public Comm. Vehicles	99.00		
Duplicate Cards	1.50		
Fines	155.10		
Testing Headlights	140.00		
Examination Fees	26.00		
Miscellaneous	1.00		
		$ 3,004.60	
Less amount overcharged on Passenger Car		5.00	
1938–1939 Balances due from Agents		1,651.20	
Journal entry re Ontario Municipal Board Fees		5,265.54	
Cheque charged back as N. S. F., Johnson Motor Sales (Transfers, $5.00, Postage $0.03)		5.03	
Deposited with Treasury as shown by Treasurer's Statement		7,902,657.35	
		$ 8,142,066.12	
Interest	4.75		
Cheque Stamps	.06		
1937–1938 Balances Paid	137.60		
Journal Entry No. 74 (Highways Dept.)	25.00		167.41
	$ 8,141,898.71		$ 8,141,898.71

ANNUAL REPORT OF THE FINANCIAL RESPONSIBILITY DIVISION FOR THE YEAR 1938

The increased application of suspension orders shown in the 1937 report continued through the year 1938, and was accelerated by an amendment to the Criminal Code making reckless driving a criminal offence. As a result, the total of suspension orders issued under the financial responsibility provisions of the Act reached a figure over 800 higher than ever before recorded while non-financial responsibility suspensions were also much higher.

The year was marked by continued effective use of the authority vested in the Minister of Highways to revoke the driving privileges of those considered unfit to operate motor vehicles by reason of physical or mental disability, or as a consequence of a driving record revealing a proneness to accident or lawlessness. With over 300,000 drivers' records now available, and with the wholehearted co-operation of the Department of Health in the detection of those suffering disability through disease or other causes, these measures are becoming annually more effective. This system tends towards the elimination of the unfit without the expense or difficulty which would be entailed in the periodic re-examination of all drivers, and while not 100% effective at the present time, it is of cumulative value and each year achieves an increased degree of efficiency.

Table I, appended hereto, shows the number of suspension orders issued annually for various causes under the financial responsibility requirements of the Act. Table II shows the number of such orders rescinded. It will be seen from comparison of the two tables that 12,351 suspensions remained in effect on December 31, 1938.

Table III shows the number of suspension orders issued annually for offences which did not necessitate the filing of proof of financial responsibility. The majority of these suspensions are for definite periods of time and no statistics are prepared as to their expiration. It is estimated, however, that at least 1500 such orders remained in effect at the end of the year indicating that at that date there were altogether some 14,000 individuals prohibited from operating motor vehicles on Ontario highways. The figures for suspensions for "other offences" in this table are especially interesting since they include most of the discretionary orders issued under the authority of the Minister of Highways. It will be seen that while for several years comparatively little use was made of this authority, it has been exercised very fully of late. Suspension orders issued under this section in 1938 almost equalled the total during all of the previous seven years.

Table No. I.

FINANCIAL RESPONSIBILITY SUSPENSIONS

September 1, 1930, to December 31, 1938

Suspension	Total	4 mos. 1930	1931	1932	1933	1934	1935	1936	1937	1938
Reckless driving......	12,274	339	983	585	1,064	1,322	1,546	1,711	2,191	2,533
Speeding...........	422	6	19	15	37	44	64	84	77	76
Racing.............	16	4	3	1	1	...	...	2		5
Driving without license	4,862	323	1,199	926	1,306	147	231	212	271	247
Criminal negligence...	274	9	34	29	36	32	25	26	54	29
Other offences	775	41	79	57	69	88	100	95	98	148
Policy cancellation....	6,134	7	212	469	976	690	821	894	1,015	1,050
Unsatisfied judgment .	622	....	48	66	90	46	73	82	111	106
Failing to remain at accident...........	1,719	92	186	72	182	175	155	232	264	361
Intoxication.........	4,798	186	554	324	345	420	532	522	826	1,089
	31,896	1,007	3,317	2,544	4,106	2,964	3,547	3,860	4,907	5,644

These suspensions all required the surrender or confiscation not only of drivers' licenses but also all motor vehicle permits and number plates registered in name of person suspended

Table No. 2.

FINANCIAL RESPONSIBILITY SUSPENSIONS RESCINDED

September 1, 1930, to December 31, 1938

Suspension	Total	4 mos. 1930	1931	1932	1933	1934	1935	1936	1937	1938
Reckless driving......	6,936	83	571	554	659	823	950	988	1,124	1,184
Speeding............	303	3	10	14	29	36	42	55	63	51
Racing..............	12	......	3	4	2	......	......	2	......	1
Driving without license	4,157	38	336	413	509	2531	xx 99	xx 95	84	52
Criminal negligence...	115	3	12	15	13	14	18	7	19	14
Other offences........	167	3	16	16	19	21	35	27	20	10
Policy cancellation....	3,272	3	100	405	518	523	xx 496	xx 447	409	371
Unsatisfied judgment..	185	......	2	14	26	22	20	35	30	36
Failing to remain at accident...........	956	18	107	101	125	107	103	116	138	141
Intoxication.........	1,452	10	195	184	149	186	183	165	187	193
x Expiry............	2,088	......	......	......	1	108	365	480	485	649
Total............	19,643	161	1,352	1,720	2,050	4,371	2,311	2,417	2,559	2,702

xx Suspensions lifted during years 1934 and 1935 included 2,584 cancelled under the provisions of an amendment to Section 72 of the Highway Traffic Act with respect to the offence of driving without a license.

x Relieved pursuant to the provisions of Section 86 of the Highway Traffic Act. Not classified according to offence.

Table No. 3

NON-FINANCIAL RESPONSIBILITY SUSPENSIONS

September 1, 1930, to December 31, 1938

Suspension	Total	4 mos. 1930	1931	1932	1933	1934	1935	1936	1937	1938
Reckless driving......	6,026	311	895	577	414	439	701	768	1,014	907
Speeding............	342	13	30	25	33	21	71	73	42	34
Racing x............	6	1	3	......	......	......	......	......	......	2
Driving without license	32	......	2	......	......	2	7	6	10	5
Criminal negligence...	6	......	1	1	1	......	1	......	1	1
Other offences........	1,790	13	39	34	41	30	232	202	36 350	26 787
Unsatisfied judgment x	68	......	......	3	8	3	17	6	15	16
Failing to remain at accident x.........	34	5	4	1	1	......	5	8	1	9
Intoxication x........	104	3	5	8	9	23	11	8	15	22
Total............	8,408	346	979	649	507	518	1,045	1,071	1,484	1,809

x These offences all involve mandatory Financial Responsibility suspensions. They are classified as non-financial responsibility here since they applied to persons already under suspension under the financial responsibility provisions and are segregated in order that the figures in Table I. will show more accurately, the number of persons actually affected.

REPORT OF ACCIDENT RECORDING DIVISION FOR THE YEAR 1938

Any possible corrections in the current traffic problem must necessarily start with a factual understanding of the accident situation. With this in mind the Motor Vehicles Branch has, since September, 1930, been collecting and compiling comprehensive data for the information of traffic and engineering departments, enforcement agencies and educational bodies. Such statistics are intended to give a clearer understanding of the problem as a whole and of many of its detailed features.

The statistics shown on the following pages include comparative figures and rates for the years 1931 to 1938, and a detailed summary of 1938 experience

Some reason for satisfaction if not for pride is to be found in the fact that, despite all-time peaks in vehicle and driver registrations and in gasoline consumption, the number of deaths from motor vehicle accidents during 1938 showed a decrease from the total of the previous year The death rate on the basis of mileage travelled was lower — with two exceptions — than in any previous year for which figures are available; and it is believed that the greater activity of enforcement and educational bodies has done much to bring about the increased safety of travel thus indicated.

STATISTICS RELATING TO MOTOR VEHICLE TRAFFIC ACCIDENTS IN ONTARIO

1931–1938

On another page is shown a recapitulation of statistics of motor vehicle traffic accidents (involving personal injury or property damage in excess of $50.00) reported to the Motor Vehicles Branch during the calendar year 1938.

Comparative figures for the years 1931 to 1938 are shown in the following table:

	1931	1932	1933	1934	1935	1936	1937	1938	Total
Fatal accidents	525	461	372	476	501	501	686	580	4,102
Personal injury accidents	6,191	6,182	5,965	6,763	7,365	7,803	8,951	8,547	57,767
Property damage only accidents	2,525	2,528	2,297	2,406	2,782	3,084	4,269	4,588	24,479
Total accidents reported	9,241	9,171	8,634	9,645	10,648	11,388	13,906	13,715	86,348
Number fatally injured	571	502	403	512	560	546	766	640	4,500
Number non-fatally injured	8,494	8,231	7,877	8,990	9,839	10,251	12,092	11,683	77,457
Amount of damage reported	$1,094,039	$994,510	$834,442	$942,722	$1,085,084	$1,241,851	$1,712,467	$1,747,841	$9,652,956
Mileage rate*	16.4	14.8	12.2	14.1	14.6	13.1	16.2	13.2	
Mileage rate (U. S. gallons)	13.7	12.3	10.2	11.7	12.2	10.9	13.5	11.0	
Death rate per 10,000 vehicles	10.2	9.4	7.7	9.4	9.9	9.3	12.3	9.6	
Death rate per 100,000 population	16.6	14.4	11.3	14.1	15.2	14.8	20.6	17.1	
Total drivers involved	13,336	13,060	12,141	13,731	15,111	16,070	20,025	19,906	123,380
Drivers in fatal accidents	614	526	420	570	579	602	843	729	4,883
Total vehicles involved	13,882	13,600	12,679	14,204	15,645	16,750	20,907	20,797	128,464
Vehicles in fatal accidents	638	556	455	587	607	626	862	758	5,089
Vehicles registered**	562,216	531,597	520,353	542,245	564,076	589,457	623,918	669,076	
Drivers registered	704,356	699,335	692,084	735,381	784,835	842,189	900,051	974,550	
CLASSIFICATION OF PERSONS KILLED:									
Drivers	122	100	65	109	102	97	150	120	865
Passengers	152	125	121	140	175	156	221	203	1,293
Pedestrians	255	230	175	215	227	244	299	259	1,904
Others (in horse-drawn vehicles, etc.)	4	8	7	6	10	8	9	3	55
Bicyclists	18	27	25	31	36	30	65	43	275
Motorcycle drivers	15	10	6	7	9	9	17	11	84
Motorcycle passengers	5	2	4	4	1	2	5	1	24
CLASSIFICATION OF PERSONS INJURED:									
Drivers	1,612	1,546	1,423	1,630	1,782	1,815	2,273	2,250	14,331
Passengers	3,208	3,041	2,827	3,208	3,492	3,633	4,484	4,403	28,296
Pedestrians	2,880	2,737	2,646	2,979	3,179	3,362	3,696	3,361	24,840
Others (persons in horse-drawn vehicles, etc.)	139	113	121	151	142	123	135	138	1,062
Bicyclists	448	572	649	822	1,021	1,106	1,253	1,298	7,169
Motorcycle drivers	163	175	163	163	184	182	205	198	1,433
Motorcycle passengers	44	47	48	37	39	30	46	35	326
Urban (city, town and village) accidents	5,777	5,572	5,218	5,792	6,510	7,048	8,101	7,755	51,773
Rural (King's highway, county and township road) accidents	3,464	3,599	3,416	3,853	4,138	4,340	5,805	5,960	34,575
Urban fatal accidents	218	193	150	194	194	193	258	206	1,606
Rural fatal accidents	307	268	222	282	307	308	428	374	2 496
AGE OF PERSONS KILLED:									
0– 4	30	30	30	25	30	26	39	25	235
5–14	74	65	49	69	52	49	87	66	511
15–35	174	158	137	162	179	172	248	209	1,439
36–54	126	107	69	117	151	134	165	144	1,013
55–64	71	55	42	59	72	51	109	88	547
65 and over	96	87	76	80	76	114	118	108	755
Total	571	502	403	512	560	546	766	640	4,500
AGE OF PERSONS INJURED:									
0– 4	483	419	452	437	501	498	586	566	3,942
5–14	1,344	1,388	1,411	1,480	1,594	1,676	1,854	1,729	12,476
15–35	2,800	3,018	2,828	3,414	3,806	4,085	4,865	4,820	29,636
36–54	1,508	1,612	1,636	1,891	2,145	2,207	2,673	2,610	16,282
55–64	460	459	502	566	633	676	848	848	4,992
65 and over	362	347	386	448	481	515	658	595	3,792
Not stated	1,537	988	662	754	679	594	608	515	6,337
Total	8,494	8,231	7,877	8,990	9,839	10,251	12,092	11,683	77,457

* Deaths per 100,000,000 miles travelled. This rate is based on gasoline consumption figures for the Province.

** Includes passenger cars, commercial vehicles, two-purpose vehicles and motorcycles (trailers not included).

F9.
2500-Nov 1937

PROVINCE OF ONTARIO
MOTOR VEHICLES BRANCH

SUMMARY OF MOTOR VEHICLE ACCIDENT STATISTICS ONTARIO DURING YEAR 1938

1. TYPE OF ACCIDENT

	Number of Accidents			
	Total	Fatal	Personal Injury	Property Damage only
1 Collision with pedestrian	3354	251	3103	
2 Collision with other automobile	5859	135	2496	3228
3 Collision with horse drawn vehicle	161	2	113	46
4 Collision with R. R. train	109	22	51	36
5. Collision with street car	217	7	85	125
6 Collision with other vehicles	22	1	13	8
7 Collision with fixed object	1376	53	692	631
8 Collision with bicycle	1320	42	1276	2
9. Collision with motorcycle	196	10	177	9
10 Non-collision accident	874	48	479	347
11 Miscellaneous	227	9	62	156
TOTALS	13715	580	8547	4588

	Number of Persons Killed										
	Previous Year's Total All Ages	Total All Ages	0-4	5-14	15-24	25-54	55-64	65 and Over	Not Stated	Male	Female
1 Collision with pedestrian	299	254	22	48	33	46	39	66		186	68
2 Collision with other automobile	160	157		2	63	43	27	22		105	52
3 Collision with horse drawn vehicle	12	2				1		1		2	
4 Collision with R. R. train	65	45		3	23	10	3	6		34	11
5. Collision with street car	13	10			2	4	2	2		8	2
6 Collision with other vehicles		1				1				1	
7 Collision with fixed object	70	59		3	26	13	11	6		46	13
8 Collision with bicycle	60	42		10	18	9	2	3		39	3
9. Collision with motorcycle	11	10			8	2				10	
10 Non-collision accident	69	52	3		33	10	4	2		41	11
11 Miscellaneous	7	8			3	5				7	1
TOTALS	766	640	25	66	209	144	88	108		479	161

	Number of Persons Injured										
	Previous Year's Total All Ages	Total All Ages	0-4	5-14	15-24	25-54	55-64	65 and Over	Not Stated	Male	Female
1 Collision with pedestrian	3617	3268	434	1113	470	560	298	281	112	2036	1232
2 Collision with other automobile	4578	4397	95	223	2046	1219	360	206	248	2372	2025
3 Collision with horse drawn vehicle	170	163	3	16	62	47	15	13	7	131	32
4 Collision with R. R. train	126	78	4	5	40	21	2	1	5	55	23
5. Collision with street car	139	122		4	62	39	6	4	7	75	47
6 Collision with other vehicles	22	17			6	6	3		2	13	4
7 Collision with fixed object	1044	1160	16	45	660	284	60	37	58	754	406
8 Collision with bicycle	1261	1312		284	749	180	50	16	33	1181	131
9. Collision with motorcycle	220	212	2	1	194	10	1		4	194	18
10 Non-collision accident	849	867	10	24	484	229	50	34	36	524	343
11 Miscellaneous	66	87	2	14	47	15	3	3	3	54	33
TOTALS	12092	11683	566	1729	4820	2610	848	595	515	7389	4294

2. HOUR OF OCCURRENCE

	Number of Accidents			
	Total	Fatal	Personal Injury	Property Damage Only
12 to 1 A M	556	35	321	200
1 to 2 A M	340	19	177	144
2 to 3 A M	222	11	103	108
3 to 4 A M	164	10	84	70
4 to 5 A M	107	9	50	48
5 to 6 A M	96	5	39	52
6 to 7 A M	150	8	90	52
7 to 8 A M.	232	12	126	94
8 to 9 A M	363	6	240	117
9 to 10 A M	386	14	207	165
10 to 11 A M	526	17	293	216
11 to 12 A M	650	26	389	235
12 to 1 P M	675	23	451	201
1 to 2 P M	560	13	381	166
2 to 3 P M.	658	25	407	226
3 to 4 P M	750	28	449	273
4 to 5 P M	1043	40	664	339
5 to 6 P M	1223	38	837	348
6 to 7 P M	1005	33	672	300
7 to 8 P M	988	60	657	271
8 to 9 P M	896	48	597	251
9 to 10 P M	725	35	464	226
10 to 11 P M.	654	27	419	208
11 to 12 P M.	660	34	376	250
Not stated	86	4	54	28
TOTALS	13715	580	8547	4588

3. DAY OF OCCURRENCE

	Number of Accidents			
	Total	Fatal	Personal Injury	Property Damage Only
1. Sunday	1962	95	1177	690
2 Monday	1768	65	1132	571
3. Tuesday	1658	71	1047	540
4 Wednesday	1740	67	1123	550
5. Thursday	1741	73	1096	572
6. Friday	1964	67	1199	698
7. Saturday	2882	142	1773	967
8. Not stated				
TOTALS	13715	580	8547	4588

4. THE DRIVER

	Number of Drivers			
	Total	In Fatal Accidents	In Personal Injury Accidents	In Property Damage Accidents
SEX				
1 Male	18631	695	10557	7379
2 Female	1275	34	783	458
AGE				
1 Under 18 years	461	14	269	178
2 18 to 24 years	4643	185	2636	1822
3 25 to 40 years	8772	328	4991	3453
4 41 to 54 years	4198	127	2434	1637
5 55 to 64 years	1266	51	714	501
6 65 years and over	420	21	232	167
7 Not stated	146	3	64	79
DRIVING EXPERIENCE				
1 Less than 3 months	267	11	168	88
2 3 to 5 months	128	10	70	48
3 6 to 12 months	171	16	87	68
4 1 to 4 years	3515	106	2024	1385
5. 5 years and over	14825	478	8461	5886
6. Not stated	1000	108	530	362
CONDITION				
1 Intoxicated	252	7	123	122
2 Physical defect	110	6	60	44
3 Extreme fatigue	190	11	104	75
4 Normal	19354	705	11053	7596
LICENSE				
1 Licensed	19049	671	10870	7508
2 Unlicensed	786	50	439	297
3 Not stated	71	8	31	32
Total number of drivers	19906	729	11340	7837
MISCELLANEOUS				
1 Hit and run	123	16	64	43
2. Hit and run apprehended	193	8	97	88
3 Arrested or summoned	2867	120	1593	1154
4 Non residents arrested.	246	9	120	117
Totals	3429	153	1874	1402

5. RESIDENCE OF DRIVER

	Number of Drivers			
	Total	In Fatal Accidents	In Personal Injury Accidents	In Property Damage Accidents
1. Ontario	18694	676	10740	7278
2. Quebec	205	10	88	107
3. Other provinces	67	1	34	32
4. Michigan	397	21	202	174
5. Ohio	48	2	22	24
6 New York	278	8	151	119
7. Illinois	42	1	22	19
8. Massachusetts	8	1	2	5
9 Pennsylvania	39	3	21	15
10 Other states	127	6	58	63
11 All others	1			1
Totals	19906	729	11340	7837

6. ACTION OF DRIVER

	Total	In Fatal Accidents	In Personal Injury Accidents	In Prop'rty Damage Only Accidents
1 Speed too fast for road or traffic conditions	1557	90	820	647
2. On wrong side of road	1240	60	591	589
3 Did not have right of way	826	22	447	357
4 Cutting in	91	2	46	43
5 Passing standing street car	20		18	2
6. Passing on curve or hill	63	2	35	26
7 Passing on wrong side	21		13	8
8 Failed to signal	236	2	103	131
9 Car ran away—no driver	21		7	14
10 Drove off roadway	823	51	456	316
Totals	4898	229	2536	2133

7. DIRECTION OF TRAVEL

	Number of Vehicles			
	Total	Fatal	Personal Injury	Property Damage Only
1. Going straight	15548	669	8901	5978
2. Turning right	511	6	310	195
3. Turning left	1830	21	1115	694
4 Backing	263	6	171	86
5 Parked or standing still	1184	24	513	647
6 Slowing down or stopping	671	10	343	318
7. Skidding	790	22	348	420
Totals	20797	758	11701	8338

8. AMOUNT OF PROPERTY DAMAGE

$1,747,841

9. THE VEHICLE

	Number of Vehicles			
	Total	In Fatal Accidents	In Personal Injury Accidents	In Prop'rty Damage Accidents
TYPE				
1 Passenger car	16821	551	9668	6602
2 Commercial vehicle	3283	170	1561	1552
3. Taxicab	187	4	100	83
4. Bus	133	6	73	54
5. Motorcycle.	283	14	258	11
6 Trailer	49	3	17	29
7. All others	16		13	3
8. Not stated	25	10	11	4
Totals	20797	758	11701	8338
CONDITION				
1. In apparent good condition	19627	682	11075	7870
2 Brakes defective	299	23	173	103
3 Steering mechanism defective	100	1	57	42
4. Glaring headlights	92	7	45	40
5. One or both headlights out	70	3	41	26
6. Tail-light out or obscured	54	5	25	24
7. No chain (wet or icy road)	1			1
8. Other defects in equipment	190	11	85	94
9 Puncture or blow-out	212	10	122	80
10. Not stated.	152	16	78	58
Totals	20797	758	11701	8338
BRAKES				
1. Two-wheel	1099	50	756	293
2 Four-wheel	19473	686	10828	7959
3. Not stated	225	22	117	86
Totals	20797	758	11701	8338
TIRES				
1 Pneumatic (high pressure)	1043	54	563	426
2. Semi balloon or balloon	19525	682	11020	7823
3. Solid rubber	2		1	1
4 Not stated	227	22	117	88
Totals	20797	758	11701	8338
INSURANCE				
1. Insured	12443	410	6662	5371
2 Un insured	6823	254	4190	2379
3. Not stated	1531	94	849	588
Totals	20797	758	11701	8338

10. Weather Conditions

	Number of Accidents			
	Total	Fatal	Personal Injury	Property Damage Only
1 Clear	9370	401	6024	2945
2 Cloudy	1930	91	1180	659
3. Fog	265	17	134	114
4 Rain	1391	54	839	498
5. Snow or Sleet.	759	17	370	372
6. Not stated				
Totals	13715	580	8547	4588

11. Light Conditions

	Number of Accidents			
	Total	Fatal	Personal Injury	Property Damage Only
1. Daylight.	7715	267	4887	2561
2. Dusk.	620	23	396	201
3. Dark	5380	290	3264	1826
4 Not stated				
Totals	13715	580	8547	4588

12. THE PEDESTRIAN

	No. Accidents	
	Fatal	Non-Fatal
ACTIONS		
Crossing at street intersections		
1. (a) With signal	1	90
2 (b) Against signal	5	110
3. (c) No signal	35	612
4. (d) Diagonally	6	51
5. Crossing between intersections	51	650
6. Waiting for or getting on or off street car		34
7. Standing in safety zone		
8 Getting on or off other vehicle	1	20
9. Children playing in street	21	513
10. At work in roadway	11	84
11. Riding or hitching on vehicle	10	46
12. Walking on highway	41	97
13 Coming from behind parked vehicle or object	19	552
14. Crossing highway	42	158
15 On sidewalk	8	86
CONDITION		
1. Intoxicated	19	142
2. Physical defect	19	48
3. Confused by traffic	21	269
4 View obstructed	23	358
5. Normal .	169	2286
Totals	251	3103

13. CLASSIFICATION OF VICTIMS

	Killed	Injured
1. Drivers	120	2250
2 Passengers	203	4403
3. Pedestrians	259	3361
4 Others — (Persons in horse-drawn vehicles, etc)	3	138
5. Bicyclists	43	1298
6 Motorcycle drivers	11	198
7. Motorcycle passengers	1	35
Totals	640	11683

14. NATURE OF INJURIES

	Fatal	Non-Fatal
1. Fractured skull	321	244
2. Fractured spine	51	52
3 Other fractures	74	1722
4 Concussion of brain	11	275
5. Severe general shock with bruises and cuts	10	5287
6 Slight shock and shake up		2234
7. Internal injuries	152	178
8 Other injuries (sprains, dislocations, wrenches, etc.)	1	477
9 Cuts by glass (only)	2	1201
10. Drowned	9	
11. Burned	9	12
12. Asphyxiated		
13. Not stated		1
Totals	640	11683

15. THE ROAD

	Number of Accidents			
	Total	Fatal	Personal Injury	Property Damage only
LOCATION				
1 Street intersection	4199	78	2849	1272
2. Between street intersections	2962	102	2276	584
3. Rural intersection.	916	44	499	373
4 Straight road	3207	218	1710	1279
5. Private driveway .	590	13	324	253
6. Curve	938	57	472	409
7. Hill	629	37	294	298
8 R. R. crossing (a) Man on duty or gates.	7		6	1
9 R R. Crossing (b) Automatic signal	19	3	7	9
10. R R. Crossing (c) Unguarded	83	19	38	26
11 Bridge	165	9	72	84
12 On ferry or dock				
Totals	13715	580	8547	4588
TYPE				
1. Earth	158	7	90	61
2. Gravel or crushed stone	1634	113	850	671
3. Paved hard surface	11923	460	7607	3856
Totals	13715	580	8547	4588
SURFACE				
1. Dry surface	9026	418	5986	2622
2. Wet surface	2147	92	1308	747
3. Muddy surface	28		19	9
4. Snowy surface	827	24	417	386
5. Icy surface	1687	46	817	824
6 Not stated				
Totals	13715	580	8547	4588
CONDITION				
1. In good condition,	13594	572	8486	4536
2. Defect in roadway	34	1	12	21
3 Road under repair	77	7	44	26
4. Obstruction not lighted	10		5	5
Totals	13715	580	8547	4588

J. P. BICKELL,
Registrar of Motor Vehicles.

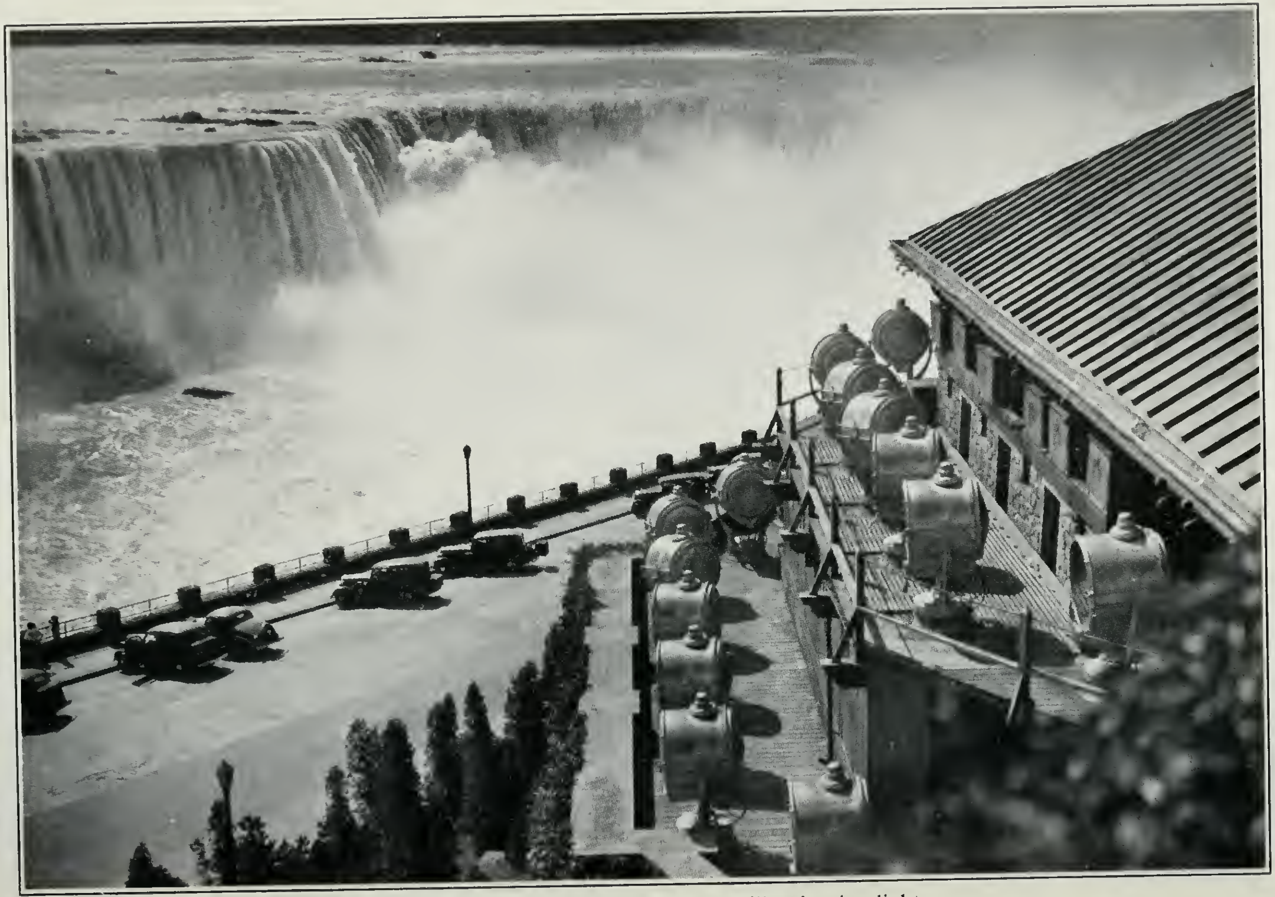
by A. A. Rowan

THE NIAGARA PARKS COMMISSION

HON. T. B. McQUESTEN, K.C., Chairman, Hamilton.
DR. GEORGE B. SNYDER, Vice-Chairman, Niagara Falls.
HON. WM. L. HOUCK, B.S., Niagara Falls.
JOHN C. M. GERMAN, K.C., Toronto.
ROSS HARSTONE, Hamilton.
A. T. WHITAKER, Brantford.
DONALD McGILLIVRAY, Port Colborne.
ARCHIE J. HAINES, M.L.A., Jordan.

GENERAL MANAGER

C. ELLISON KAUMEYER.



Close-up of Horseshoe Falls, showing illuminating lights

FIFTY-THIRD ANNUAL REPORT

OF THE

NIAGARA PARKS COMMISSION

To The Honourable Albert Matthews, LL.D.,
Lieutenant-Governor of the Province of Ontario.

May It Please Your Honour:

The Niagara Parks Commission begs to submit for the information of the Legislature, the Fifty-third Annual Report, covering the fiscal year from April 1st, 1938, to March 31st, 1939.

The membership of the Commission remains unchanged from the previous year and consists of Hon. T. B. McQuesten, K.C., Minister of Highways, Toronto, Chairman; Dr. G. B. Snyder, Niagara Falls, Vice-Chairman; Hon. Wm. L. Houck, B.S., Niagara Falls; A. J. Haines, M.L.A., Jordan; J. C. M. German, K.C., Toronto; Ross Harstone, Hamilton; A. T. Whitaker, Brantford; Donald McGillivray, Port Colborne. C. Ellison Kaumeyer, Chippawa, is General Manager and Secretary to the Commission.

The work of the Niagara Parks Commission falls into the following categories:

Preservation
Restoration
Commemoration
Beautification
Attraction

In order, the Commission endeavours to preserve all that is worth while in natural beauty, in historic interest, affecting the Niagara Peninsula, including Navy Hall, Butler's Barracks and the great Cataract. It has restored national monuments which have felt the hand of time, particularly the historic Fort George and Fort Erie and the William Lyon Mackenzie home at Queenston. It has commemorated the pioneers, whether the United Empire Loyalists or the Six Nations Indians, or the British and Canadian troops which rallied to the defence of the Niagara Frontier and the "Rebels" who, against "The Family Compact", stood out for responsible government.

Under the heading of "Restoration", most important work continued during the year was the reconstruction of Fort George, from the original plans obtained through the Department of National Defence, Department Public Archives, Historic Site Monuments Board, Ottawa, and other sources. The lands containing Fort George were leased from the Department of National Defence at the nominal fee of $1.00 per year.

The authenticity of the reconstruction work at Fort George was largely made possible through the very energetic efforts of former Commissioner Fred W. Beard, St. Catharines, whose report on plans of Fort George and vicinity, as presented to the Commission, through the co-operation of the Federal authorities, was most comprehensive. From the report which is on file in the Commission's offices, the following excerpts will be of historical interest in connection with the reconstruction work now under way.—

FORT GEORGE AND ENVIRONS

Historical Narrative

The construction of the first stockade on the site of Fort Niagara was commenced in the winter of 1678. Under the control of France, it grew into a large fortress and became a centre for the civilization of the interior of this continent. After the capture by the British in 1759 the fort continued as a garrison and trading post. The country on the west bank was a dense wilderness of forest and swamp to the foot of the mountain, the only clearing being the old plains of the Neutrals, the site of Niagara-on-the-Lake, then occupied by the Mississauga Indians, now referred to as the Military Reserve. With the Revolution, Fort Niagara became a possession of the new-born Republic and the British had to establish new quarters on the west side of the river.

While the treaty of peace, definitely making the Niagara an international river, was signed in 1783, the final transfer of the old fortification on the eastern bank to the new owners did not take place until thirteen years later. During this "hold over" period the British had ample time to construct a new fortification and in 1796 the transfer of the British garrison was made from Fort Niagara to Fort George. Historically Fort Niagara was one of the most important posts in North America and the restored fort is now a major attraction to visitors to the Niagara area.

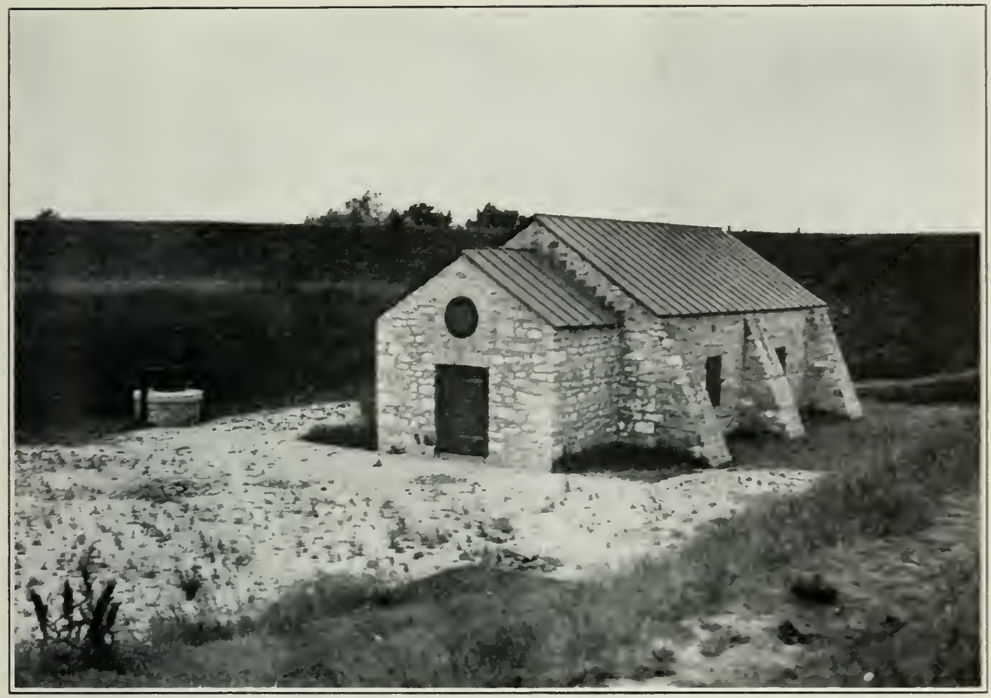
From the viewpoint of reproduction Fort Niagara and Fort George present somewhat different problems. Fort Niagara was a self-contained entity, everything pertaining to it having been within the walls of the fortification. Regarding Fort George the records would show that while many of the structures were within the fort, there were some upon the Reserve, some within the Town, some at Butler's Barracks and others at Fort Mississauga. For many years the Town of Niagara was in all respects a garrison post, the number of troops being from 600 to 1,000 men.

FORT GEORGE

Its Early Establishment

From the "Annals of Niagara"

"As an immediate consequence to Jay's treaty and the giving up of Fort Niagara, Governor Simcoe in 1795, commenced the building of Fort George, a large military work of some ten acres of ground on the bank of the river. It was constructed with deep ditches, pickets, high ramparts and bastions at the angles, with spacious barracks, magazines and other suitable buildings inside. Its main gate faced to the north-west. It was in all respects a strong fort". The construction of Fort George necessitated the pulling down of the Governor's new mansion—the scene of the meeting of the first Parliament—which is now covered by the high ramparts facing the river. A large boulder marks the spot where beneath it stood the residence and some traces of the Governor's fish ponds may still be seen in the channel of a spring that issues out of the bank. "During the American occupation in 1813 the earthworks were reconstructed and the general conformation of the Fort considerably altered". (See Ground Plan 1814)



Powder House, Fort George (restored)

First Customs House (restored), Niagara-on-the-Lake

Navy Hall (restored) Niagara-on-the-Lake

View in Queenston Heights Park

Fort Mississauga

From the "Annals of Niagara"

"There was quiet on the frontier during the rest of the winter of 1813-14. Sir Gordon Drummond took the opportunity offered by the possession of Fort Niagara to build a small but strong fort on Mississauga Point. The mass of ruins in the town offered much material for the new fort, and by spring the fort was completed, with magazines and armed with heavy cannon and mortars and with barracks for three hundred men.

"Its guns were removed in 1856".

Butler's Barracks

From "Ten Years of the Colony of Niagara". 1780–1790.

"In the autumn of 1778 a range of log barracks had been built for the rangers on the west side and occupied by them since its completion. It was in the vicinity of this building it was now proposed to form a settlement. These buildings appear upon an early plan as a series of small huts within a compound or palisade. These were later replaced by larger buildings some of which may yet be standing. The lands of the Niagara area were first opened to settlers in 1780."

Under the same head of "Restoration", the work of restoring Old Fort Erie to its condition as at the outbreak of war in 1812 was completed during the year. In 1812 the fort was by no means finished. While the front was impressive, the south flank was wide open to attack and the reconstructed fort shows how this was the case, and throws light on the story of the capture of the fort by the U.S. invaders. Compared to a modern fortification, the fort has little strength. It will be evidence, however, for many years to come, of the Fort Erie which existed in the early days and under what difficulties its original defenders did their best to save the position. To our American visitors it will be of particular interest, while to all it will be a memorial to heroism displayed during the days of strife and a reminder that for more than a century there has been peace along the border and that the forts are not for military use, but tokens of historical days when the sword was felt the only solution for problems between nations.

With the Fort restored, it is expected that there will be a considerable increase in tourist visitors. It was decided to convert the second floor in the pavilion to a caretaker's apartment.

Permission was given to the Historic Sites and Monuments Board to affix a bronze tablet to the outer wall of Fort Mississauga to mark the site of the first lighthouse on the Great Lakes, which was originally built on the site of the present Fort.

Three tablets are to be attached to the Lundy's Lane Monument, bearing the names of officers and soldiers of the regular regiments of the British Army and Canadian Militia killed in action during the engagement.

The Commission approved of a site along the Niagara River between Niagara Falls and Fort Erie for the erection of a peace memorial plaque by the Louisiana-Mississippi District of the Kiwanis International.

Advances in Beautification

The Commission has made extensive advances in beautification, both directly by extension of the flowers beds in Queen Victoria Park, the building of the Oakes Garden Theatre, the planting of the talus to make the banks of the

Niagara Gorge more attractive, the beginning of an arboretum along the Niagara Glen, and heavy planting of flowering trees along the Niagara Parkway between Fort Erie and Niagara-on-the-Lake, and indirectly by planting out extensive nurseries with seeds, cuttings and nursery tree and shrub stock, to provide for future plantings. Collectively, the lands of the Niagara Parks Commission will eventually be a centre of arboricultural, horticultural and floricultural specimens, available to the people of Ontario, demonstrate what can and will grow under natural conditions in the Niagara Peninsula. Especially with regard to trees, the advance will be slow, since from planting of tree seeds to maturity sufficient to bring blossom is a matter of many years. The time will come, however, when the Niagara Parkway will be one of the most beautifully planted areas in the world, in addition to its present natural scenic attractions.

The interest in the park shown by intending United States tourists keeps at a high mark. Previous brochures and folders having been exhausted, the Commission authorized issuance of 200,000 map folders and 200,000 illustrated brochures, for the season of 1939 for free distribution. They will be available through the Ontario Publicity Bureau, Chamber of Commerce, leading Hotels, Automobile Clubs, Railroad and Steamship Agencies, in all principal Cities and Towns in the U.S.A. and Canada and also direct through the Niagara Park Commission in reply to inquiries so received.

In addition, four separate booklets were authorized, one each for the following:

No. 1—Fort George, Navy Hall, Fort Mississauga, Butler's Barracks, Butler's Burying Ground, Niagara-on-the-Lake.

No. 2—Queenston Heights, Brock's Monument and William Lyon Mackenzie Building.

No. 3—Niagara Glen, Training School for Apprentice Gardeners, Whirlpool, Oakes Garden Theatre and Clifton Gate.

No. 4—Fort Erie and Mather Park.

All National Memorials and Historic Sites, marked by the Historical Sites and Monument Board, will be included in the proper booklet according to their location. It is intended to offer these booklets for sale at the concessions of the Commission at 25 cents each.

Oakes Garden Theatre

During the year further work was carried out on details of the Oakes Garden Theatre. Ornamental iron gates were made in our workshops by our own craftsman for use in the Garden Theatre. They are a feature which attracts much attention from visitors. Stone urns were also placed around the area. Flagging was laid, to provide good walking conditions irrespective of the weather. Additional spray heads and water piping were laid to provide for drought conditions, which were felt for the last two months of summer and early fall last year. The fountain was also installed and benches constructed by our staff in the winter months were placed in position and being of the doubleseat single-back type, they give double capacity.

Music Season

Three choral programmes were presented in the Oakes Garden Theatre during the summer, the Commission presenting the Mendelssohn Choir, Toronto,

Rock Garden and Administration Bldg., Queen Victoria Park

William Lyon Mackenzie home at Queenston (restored) the Bach Choir, Hamilton, and the Schubert Choir, Brantford. The weather for the first two concerts was much below normal, rain threatening most of the time. The third concert was under more favourable conditions. Two band concerts by the Niagara Falls Kiltie Band were given under the auspices of the Commission. The Commission also adopted a policy of not permitting the grounds to be commercialized by granting their use to organizations which would make a charge to the public or make public collections. In this connection also, the Commission decided that the Oakes Garden Theatre should not be used for religious services, but that full co-operation be granted to any religious body for holding any such service in Queen Victoria Park.

Mather Park

Mr. Alonzo C. Mather of Chicago and Los Angeles entered into an agreement to contribute the sum of $30,000.00 toward the erection of a Gateway at Mather Park, Fort Erie. The land upon which the proposed Gate would be located was formerly deeded to the Commission by Mr. Mather.

Major Ceremony

Outstanding during the year was the formal opening of the reconstructed William Lyon Mackenzie house at Queenston and of the unveiling of Clifton Gate at the entrance to Queen Victoria Park, on June 18, 1938.

Rt. Hon. William Lyon Mackenzie King, Prime Minister of Canada, and members of his family, Hon. Mr. Howe, Minister of Transport, together with Senator Dandurand, leader of the Government in the Canadian Senate, were present for the formal ceremonies.

At the William Lyon Mackenzie house, a gold key was presented to the Prime Minister to formally open the home in which his grandfather, William Lyon Mackenzie resided prior to the stirring days of 1837, and where he published "The Colonial Advocate", which carried on a campaign for responsible government against the "Family Compact" of the day.

The distinguished visitor read a letter written by William Lyon Mackenzie in which he noted that he had planted acacias (Locust trees) in front of his home, the Prime Minister noting that those trees were today mature and sheltered the reconstructed home.

Interested visitors at the formal opening of Mackenzie House in Queenston by the Prime Minister of Canada, on Saturday morning, were Mr. W. Dewitt Manning, member of the editorial staff of "The Democrat and Chronicle" of Rochester, N.Y., and Morley Turpin, who has charge of the archives at the University of Rochester. Both men drove here to see the Premier of Canada open Mackenzie house.

Mr. Manning is extremely interested in the history of Mackenzie family because of the fact that the press upon which "The Colonial Advocate" was printed was bought in Rochester in 1824. A Rochester, N.Y. printer named Hiram Leavenworth was hired by Mackenzie to operate the press. Mr. Turpin has in his possession the original contract between Mackenzie and Leavenworth by which Mackenzie agreed to pay $350 for the press, type, ink and other materials and £5 per month to Leavenworth for his services. Mackenzie bought the press in 1825 from Leavenworth who later went to St. Catharines and established a printing business.

In the beautiful and historic setting the Prime Minister, the Rt. Hon. William Lyon Mackenzie King, on Saturday afternoon unveiled a memorial arch erected to the memory of the early pioneers of Canada. The ceremony took place in the Oakes Garden Theatre. By pressing a small electric switch the Premier uncovered the Arch which had been swathed in red, white and blue bunting for the occasion. A crowd estimated at over 7,000 men and women including many dignitaries of the Government of Canada, and the Province of Ontario attended the function.

Training School

The work of the Niagara Parks Commission Training School for Apprentice Gardeners reached its peak during the year, as for the first time the school had its maximum of 24 boys. The school was started with eight boys, the second year an additional eight boys were entered, and the third year another octet. This brought the membership of capacity. The first year class will graduate in October 1939, at which time a new class of eight freshmen will enter. The work will result in Canadian Trained Gardeners being available for Ontario parks, institutions and public service, familiar with Ontario climatic conditions and materials suitable for those conditions.

The practical training includes drainage work, laying out of roadways, nursery work, greenhouse care, spraying, cultivation, tree surgery and all other phases of gardening work. Four of the boys of the first year class through the efforts of Commissioner Haines, were attached to the Vineland Station of the Dominion Government for the purpose of instruction for a period of two weeks.

Fresh vegetables from the vegetable gardens at the Bothy (Apprentice Gardeners' School) were made available for the Restaurants operated by the Commission, during the season and supplied the materials for packing, canning and preserving for the use of the school during the winter months.

The stone additions to the original Murray House, which the Commission used as a nucleus for the apprentices' quarters, were completed during the year. Accommodation is now provided for 24 boys. The school system is based largely on the British Boarding School plan and the Canadian boys who are apprentices have taken keenly to the plan. During the year they produced a "School Paper" and formed a softball team, with intention to engage city teams during the coming summer. A telephone service was installed to the Bothy, proving of value in direction of training and work and a precaution in case of fire. A garage was constructed of stone to match the Bothy, it is available for storage of implements. Much flagging was laid around the lecture hall and the Bothy proper. A new floor was laid in the old section of the Bothy and electric lighting carried through the cellar. An opportunity arose for the purchase of a piano at low cost for the Bothy and advantage was taken of it.

Interesting excerpts from the semi-annual reports of K. M. Broman, Superintendent of Arboriculture and in charge of the school, follow:—

> We have done our utmost to divide the work to give all the students the best possible training and at the same time accomplish considerable planting and landscape improvement outside the Nursery and School grounds.
>
> I suggest this year to present the most outstanding students from each year with an award for their work and conduct. The student body has voted on this presentation and the apprentices mentioned below are to receive the books after their names:
>
> Third Year Student—R. E. Halward. Book: "Methods of Plant Physiology" by W. E. Loomis and C. A. Skull.

Second Year Student—D. Robertson. Book: "The Families of Flowering Plants" by J. Hutchinson.

First Year Student—R. A. Lutes. Book: "Textbook of Systematic Botany" by D. B. Swingle.

A wonderful opportunity was given to all the apprentices when they assisted in moving the great buttonwood tree down at Fort George this spring. It is not often that such a feat as this is performed. Some of them began work on the tree Friday, April 22nd, and the others were given turns subsequently. Quite a number of them were indeed fortunate enough to be at work when the tree was actually shifted from its old to its new location. Work was finished here by the students on May 5th after the tree had been manured and cared for.

On Wednesday, March 30th, 1938, the examination, by the local Plant Inspection Department, of the new nursery stock was commenced and the apprentices were kept busy heeling-in the trees and shrubs and were able to learn the names of a high percentage of them as they did so. This work of inspection was not completed till April 11th owing to unfavourable weather. However, in the meantime, the boys were busy making cuttings of shrubs.

During this spring there were over ten thousand cuttings of trees and shrubs planted in the frameyard of the School and not included in this number are five thousand black walnut seedlings (many of which originated from nuts off mature trees in the parks) which have made excellent growth up to the present time.

The regular work of planting was carried on in the spring months. The new nursery stock, which had been heeled in, in April, was properly planted and some plantings were made around the School Grounds, such as the splendid collection of conifers on the south side of the residence, the roses just the other side of the roadway from this evergreen-planting, and the hybrid tea roses which were planted in front of the Lecture Hall. Also this spring the students planted around two hundred varieties of phlox along the roadway into the School and later they planted a variety of annual flowers in between. These flowers were an exhibition of color.

There were well over three thousand seven hundred (3,700) trees and shrubs taken out of the nursery rows and used in different plantings this year, among which are, the Whirlpool Planting, Oakes Garden Theatre, Brock's Monument and Queen Victoria Park.

The third year Apprentices were given the opportunity of gaining much valuable experience when they planted the trees and shrubs at different public schools, diverse beds at Brock's Monument, Oakes Garden Theatre and beds in Queen Victoria Park.

The iris along the highway in front of the school were a magnificent display of color and variety this spring. There were many thousand blooms more than in 1937 and these were not only superior in size but bloomed two weeks before they did in 1937. Last year they were at their best about June 8th and this Year May 24th, 1938. They attracted the attention of many tourists who on parking their cars on the new parking space opposite the entrance to the School, came over and voiced their appreciation and said they had never seen such a splendid display of iris.

NIAGARA DISTRICT MEMORIALS

The complete list of historic sites, memorials and markers in the Niagara River District, follows, with an "X" denoting those which are NOT on property of the Niagara Parks Commission:

1. Bronze Tablet by the Historic Sites and Monuments Board place on a cairn. Location—the northwesterly end of Queen Street in the Town of Niagara-on-the-Lake.

BATTLEFIELD OF FORT GEORGE
27TH MAY 1813

LANDING PLACE
OF INVADING TROOPS
HERE WAS FOUGHT THE
ACTION OF THAT DAY

PRO PATRIA
IN MEMORY OF

LIEUTENANT JAMES DRUMMIE, 8TH REGIMENT, CAPTAIN ANDREW LIDDLE AND ENSIGN WILLIAM McLEAN, GLENGARRY LIGHT INFANTRY AND THE NON-COMMISSIONED OFFICERS AND MEN OF THE ROYAL ARTILLERY, 8TH REGIMENT, 49TH REGIMENT, GLENGARRY LIGHT INFANTRY, ROYAL NEWFOUNDLAND REGIMENT AND LINCOLN MILITIA KILLED IN THIS BATTLE.

2. "X" Stone Marker placed by the Niagara Historical Society. Location—The northwesterly end of Queen Street in the Town of Niagara-on-the-Lake.

HERE WERE FOUND IN
AUGUST 1899
THE REMAINS OF THREE
SOLDIERS WHO FELL ON
27TH MAY, 1813
IN DEFENCE OF OUR
COUNTRY.

3. Stone Marker placed by the Niagara Historical Society. Location—The southeasterly end of Ricardo Street near Old Fort George in the Town of Niagara-on-the-Lake.

THE SITE OF NAVY HALL
AND PROBABLY OF THE
FIRST PARLIAMENT 1792.
THE LONG LOW BUILDING NEAR
IS SUPPOSED TO BE ONE OF
THE FOUR HOUSES CALLED
NAVY HALL.

4. Bronze Tablet by the Historic Sites and Monuments Board placed on a cairn. Location—The site of Old Fort George in the Town of Niagara-on-the-Lake.

FORT GEORGE

BUILT BY THE SECOND BATTALION ROYAL CANADIAN VOLUNTEERS, UNDER LT. COLONEL JOHN MacDONELL, STATIONED HERE, 1797–1801. ENLARGED AND STRENGTHENED BY GEN. BROCK IN 1812. ON 25TH-26TH MAY 1813, ITS PARAPETS WERE BEATEN DOWN BY AN OVERWHELMING CONVERGING FIRE FROM FORT NIAGARA AND NEIGHBOURING BATTERIES, AND ON 27TH MAY IT WAS OCCUPIED BY AN INVADING ARMY. AN INTRENCHED CAMP FOR 6000 MEN WAS FORMED ON ITS WESTERN FLANK AS A BASE OF OPERATIONS IN THE NIAGARA PENINSULA. BLOCKADED JULY-OCTOBER BY A SMALLER BRITISH FORCE. REGAINED ON 10TH DECEMBER 1813 AND MAINTAINED AS A MILITARY POST UNTIL 1845.

ERECTED 1930.

5. Stone Marker probably placed by the Niagara Historical Society. Location—Old Fort George in the Town of Niagara-on-the-Lake.

THIS MARKS
THE SPOT WHERE
GEN. SIR ISAAC BROCK
WAS BURIED FROM
1812 TO 1824

6. Stone Marker placed by the Niagara Historical Society in the year 1915. Location—The east side of the Niagara River Parkway, two miles north of Queenston.

BROWN'S POINT

HERE GEN. SIR ISAAC BROCK
CALLED OUT ON HIS WAY TO
QUEENSTON HEIGHTS
13TH OCTOBER 1812
PUSH ON
YORK VOLUNTEERS

7. Stone Marker placed by the Niagara Historical Society in the year 1915. Location—West side of Niagara River Parkway, three and one-half miles north of Queenston.

THE BUILDING NEAR
IS HALF OF THAT BUILT
BY THE COUNT DE PUISAYE
A FRENCH REFUGEE
ABOUT 1800

8. Bronze Tablet by the Historic Sites and Monuments Board placed on a stone monument erected by the Niagara Parks Commission in the year 1928. Location—The east side of the Niagara River Parkway, one-half mile north of Queenston.

SITE OF
VROOMAN'S BATTERY
ENGAGED IN THE
BATTLE OF
QUEENSTON HEIGHTS
OCTOBER 13TH 1812.
THE GUN
MOUNTED HERE
FIRED 112 ROUNDS
ON THAT DAY

9. Stone Cenotaph. Location—The foot of Queenston Hill.

NEAR THIS SPOT
MAJOR GENERAL
SIR ISAAC BROCK, K.C.B.
PROVISIONAL LIEUTENANT
GOVERNOR OF UPPER CANADA
FELL ON 13TH OCTOBER 1812
WHILE ADVANCING TO REPEL
THE INVADING ENEMY

(North side of stone)

THIS STONE
WAS PLACED BY HIS ROYAL HIGHNESS
ALBERT EDWARD PRINCE OF WALES
ON 18TH SEPTEMBER 1860

(South side of stone)

10. Stone Marker placed by the Niagara Historical Society. Location—The north side of York Street at Queen Street in the Village of Queenston.

HOME OF
WILLIAM LYON
MACKENZIE
THE BIRTHPLACE OF
RESPONSIBLE
GOVERNMENT.

11. Bronze Tablet on boulder erected by the Lundy's Lane Historical Society in the year 1906. Location—The northerly slope of Queenston Heights Park.

SITE OF REDAN BATTERY
NEAR THIS SPOT
LIEUT.-COLONEL JOHN MacDONELL,
ATTORNEY GENERAL OF UPPER CANADA,
WAS MORTALLY WOUNDED 13th OCTOBER 1812.
ERECTED BY LUNDY'S LANE HISTORICAL SOCIETY 1906.

12. Cut Stone Memorial erected by the Government of Canada in year 1910. Location—The edge of the escarpment in Queenston Heights Park.

THIS MONUMENT HAS BEEN ERECTED
BY THE
GOVERNMENT OF CANADA
TO
LAURA INGERSOLL SECORD
WHO SAVED HER HUSBAND'S LIFE
IN THE BATTLE ON THESE HEIGHTS
OCTOBER 13th 1812
AND WHO RISKED HER OWN
IN CONVEYING TO CAPT. FITZGIBBON
INFORMATION BY WHICH HE WON
THE VICTORY OF BEAVER DAMS

ERECTED 1910.

13. Stone Column, one hundred and ninety-six feet high erected by the Canadian Government in 1856. Location—Queenston Heights Park.

14. Bronze Tablet by the Historic Sites and Monuments Board placed on an irregular piece of Queenston limestone erected by the Niagara Parks Commission in 1932. Location—Old Fort at Queenston Heights.

FORT DRUMMOND
THIS DOUBLE FORTIFICATION
WAS BUILT BY MILITARY LABOUR
FOR THE DEFENCE OF THIS
FRONTIER IN MAY AND JUNE, 1814
AND NAMED IN HONOUR OF
SIR GORDON DRUMMOND
THE POSITION BEING RENDERED
UNTENABLE IT WAS DISMANTLED
AND ABANDONED, 10th JULY, 1814.
REOCCUPIED BY BRITISH TROOPS
ON 23rd JULY, AND HELD AS A
MILITARY POST UNTIL THE END
OF THE WAR.

15. "X" Stone Marker placed by the Niagara Historical Society. Location—The south side of the Queenston-St. Davids Road, one and one-half miles west of Queenston.

SHEAFFE'S
PATH TO VICTORY
OCTOBER 13th
1812

16. "X" Stone Marker placed by the Niagara Historical Society. Location—The Presbyterian Church in St. Davids.

HEADQUARTERS OF
DE ROTTENBERG 1812

17. "X" Stone Marker placed by the Niagara Historical Society. Location—The St. Catharines Road west of St. Davids.

ST. DAVIDS BURNED BY
COLONEL STONE
JULY 19TH - 1814

ERECTED 1909

18. "X" Bronze Tablet by the Historic Sites and Monuments Board placed on a stone monument. Location—The old Portage Road 200 yards north of the English Church in Stamford.

NIAGARA PORTAGE ROAD

EAST OF THIS MEMORIAL PASSES
THE PORTAGE ROAD QUEENSTON-
CHIPPAWA OPENED BY UNITED
EMPIRE LOYALISTS IN 1788.
GOVERNMENT PORTAGE FROM 1791.
PRINCIPAL ROUTE OF TRAVEL
AND TRADE TO UPPER LAKES
REGION UNTIL OPENING OF
WELLAND CANAL, 1829, AND
RAILWAYS, 1854.
IMPORTANT STRATEGIC POSITION
AND LINE OF COMMUNICATION
DURING WAR OF 1812-14 AND
REBELLION OF 1837-8.

ERECTED 1929

19. "X" Bronze Tablet by the Historic Sites and Monuments Board placed on a cairn. Location—One mile southeast of Thorold on the Thorold Stone Road.

BATTLEFIELD
OF THE
BEECHWOODS
OR
BEAVER DAMS
JUNE 24TH
1813.

20. Stone Monument erected by the Government of Canada in the year 1895. Location—Lundy's Lane Cemetery, City of Niagara Falls.

1812 - 1814
LUNDY'S LANE
ERECTED BY THE
CANADIAN PARLIAMENT
IN HONOUR OF THE VICTORY
GAINED BY THE
BRITISH AND CANADIAN FORCES
ON THIS FIELD ON THE
25TH DAY OF JULY 1814
AND IN GRATEFUL REMEMBRANCE
OF THE BRAVE MEN
WHO DIED ON THAT DAY
FIGHTING FOR THE UNITY
OF THE EMPIRE

1895.

21. Memorial Stone erected by the Lundy's Lane Historical Society and public subscription in the year 1901. Location—Lundy's Lane Cemetery, City of Niagara Falls.

TO PERPETUATE
THE NAME AND FAME OF
LAURA SECORD
WHO WALKED ALONE NEARLY 20 MILES BY A
CIRCUITOUS, DIFFICULT AND PERILOUS ROUTE
THROUGH WOODS AND SWAMPS AND OVER
MIRY ROADS TO WARN A BRITISH OUTPOST AT
DE CEW'S FALLS OF AN INTENDED ATTACK
AND THEREBY ENABLED LIEUT. FITZGIBBON
ON THE 24TH JUNE, 1813, WITH LESS THAN 50
MEN OF H.M. 49TH REGT., ABOUT 15 MILITIAMEN
AND A SMALL FORCE OF SIX NATION AND
OTHER INDIANS UNDER CAPTAINS WILLIAM
JOHNSON KERR AND DOMINIQUE DUCHARME
TO SURPRISE AND ATTACK THE ENEMY AT
BEECHWOODS (OR BEAVER DAMS) AND AFTER
A SHORT ENGAGEMENT TO CAPTURE COL.
BOERSTLER OF THE U.S. ARMY AND HIS ENTIRE
FORCE OF 542 MEN WITH TWO FIELD PIECES.

22. Memorial Stone erected by the Lundy's Lane Historical Society. Location—Lundy's Lane Cemetery, City of Niagara Falls.

THIS MEMORIAL
IS
ERECTED TO COMMEMORATE
THE CELEBRATION OF THE
ONE HUNDREDTH ANNIVERSARY
OF THE
BATTLE OF LUNDY'S LANE
HELD HERE JULY 25TH, 1914,
UNDER THE AUSPICES OF
THE LUNDY'S LANE
HISTORICAL SOCIETY.

23. "X" Bronze Tablet and Cairn placed by the Historic Sites and Monuments Board. Location—The west side of the Welland Canal Bridge at Allanburg.

THE OLD WELLAND
CANAL

NEAR THIS SPOT ON 30TH NOVEMBER, 1824
THE FIRST SOD OF THE OLD WELLAND
CANAL WAS CUT BY GEORGE KEEFER,
PRESIDENT OF THE WELLAND CANAL
COMPANY, IN THE PRESENCE OF WILLIAM
HAMILTON MERRITT, CHIEF PROMOTER
OF THE ENTERPRISE AND ABOUT 200
OTHER PERSONS.
THIS GREAT WORK
CONNECTING LAKES ERIE AND ONTARIO
FOR SHIP NAVIGATION WAS PLANNED
AND CARRIED OUT BY A PRIVATE
COMPANY.

24. Bronze Tablet by the Historic Sites and Monuments Board placed on a stone monument erected by the Niagara Parks Commission in the year 1923. Location—East side of Niagara River Parkway at Usher's Creek, two miles south of Chippawa.

BATTLEFIELD OF CHIPPAWA
OR STREET'S CREEK
JULY 5TH - 1814

PRO PATRIA

IN MEMORY OF
CAPTAIN PERCY BAILLIE, ROYAL SCOTS, LIEUTENANT PATRICK GIBBONS AND ENSIGN JOHN REA, 100TH REGIMENT, CAPTAIN JOHN ROWE, GEORGE TURNEY AND LIEUTENANT C. MACDONELL, 2ND REGIMENT OF LINCOLN MILITIA AND THE NON-COMMISSIONED OFFICERS AND MEN OF THE ROYAL ARTILLERY, ROYAL SCOTS, 8TH REGIMENT, 100TH REGIMENT, AND THE LINCOLN MILITIA, WHO WERE KILLED IN THIS BATTLE.

25. Bronze Tablet by the Historic Sites and Monuments Board placed on a stone memorial erected by the Niagara Parks Commission in the year 1928. Location—East side of Niagara River Parkway, one-half mile south of Usher's Creek, Township of Willoughby.

NAVY ISLAND SHIPYARD

AT THE SHIPYARD OF NAVY ISLAND NEARLY OPPOSITE THIS POINT, WERE BUILT IN THE YEARS 1763-64, THE SLOOPS CHARLOTTE AND HURON, AND THE SCHOONERS BOSTON, GLADWIN, AND VICTORY.

THESE WERE THE FIRST VESSELS THAT NAVIGATED THE UPPER LAKES UNDER THE BRITISH FLAG.

FROM 14TH DECEMBER, 1837, UNTIL 14TH JANUARY, 1838, NAVY ISLAND WAS OCCUPIED BY A BAND OF INVADERS, WHO WERE BOMBARDED BY SEVEN BATTERIES ON THIS SHORE, ON THE NIGHT OF 29TH-30TH DECEMBER, 1837, THE STEAMER CAROLINE, LYING AT SCHLOSSER, WAS TAKEN AND DESTROYED BY A PARTY OF VOLUNTEERS, LED BY CAPTAIN ANDREW DREW, R.N.

26. "X" Bronze Tablet and Cairn placed by the Historic Sites and Monuments Board. Location—Cooks Mills, Township of Crowland.

HERE WAS FOUGHT
THE ACTION KNOWN AS
THE BATTLE OF
COOKS MILLS
19TH OCTOBER, 1814
PRO PATRIA
IN MEMORY OF
THE NON-COMMISSIONED
OFFICERS AND MEN OF
THE 82ND, 100TH AND 104TH
REGIMENTS AND GLENGARRY
LIGHT INFANTRY
KILLED IN ACTION.

THIS SITE DONATED BY ROY METHEWS,
HISTORIC SITES AND MONUMENTS BOARD OF CANADA.

27. "X" Bronze Tablet and Cairn placed by the Historic Sites and Monuments Board. Location—Garrison Road, six miles west of Town of Fort Erie Township of Bertie.

RIDGEWAY BATTLEFIELD
PRO PATRIA
IN ABIDING MEMORY
OF THE OFFICERS AND MEN
OF THE QUEEN'S OWN
RIFLES, 13TH HAMILTON
BATTALION, CALEDONIA
AND YORK RIFLE COMPANIES
WHO FOUGHT HERE IN DEFENCE
OF THEIR COUNTRY AGAINST
FENIAN RAIDERS ON
THE 2ND JUNE 1866.

28. Bronze Tablet by the Historic Sites and Monuments Board placed on a stone monument erected by the Niagara Parks Commission in the year 1928. Location—East side of Niagara River Parkway, one-half mile north of town of Fort Erie.

HERE WAS FOUGHT
THE ACTION OF
FRENCHMAN'S CREEK
NOVEMBER 27TH 1812

LANDING PLACE
OF FENIAN RAIDERS
MAY 31ST 1866

PRO PATRIA

IN MEMORY OF
NON-COMMISSIONED OFFICERS
AND MEN OF THE
ROYAL ARTILLERY, 49TH REGIMENT
AND NORFOLK MILITIA
KILLED IN ACTION
AT THIS PLACE.

29. Stone Monument, thirty feet high erected by the Dominion Government in the year 1904. Location—In Old Fort Erie Park.

IN MEMORY OF THE
OFFICERS AND SEAMEN OF THE ROYAL
NAVY, THE OFFICERS, NON-COMMISSIONED
OFFICERS AND PRIVATES OF THE ROYAL
ARTILLERY, ROYAL ENGINEERS, ROYAL
MARINES, 1ST ROYAL SCOTS, 19TH LIGHT
DRAGOONS, 6TH, 8TH (KING'S), 41ST, 82ND,
89TH, 103RD, 104TH, AND DEWATTEVILLE'S
REGIMENTS, THE GLENGARRY LIGHT INFANTRY, AND THE INCORPORATED
MILITIA WHO FELL DURING THE SIEGE
OF FORT ERIE AUGUST AND SEPTEMBER

— 1814 —

OFFICERS KILLED DURING SIEGE OF FORT ERIE

COLONEL HERCULES SCOTT, 103RD REGT., LIEUT. COL. WILLIAM DRUMMOND, 104TH REGT., LIEUT. COL. JOHN GORDON, ROYAL SCOTS, CAPTAIN R. D. PATTERSON, 6TH REGT., CAPT. TORRENS, 8TH REGT., CAPT. J. M. WRIGHT, 82ND REGT., CAPT. EDWARD WALKER, INCORPORATED MILITIA, LIEUT. COPLES RADCLIFFE, R. H., LIEUT. NOEL, ROYAL SCOTS, LIEUT. J. RUTLEDGE, ROYAL SCOTS, LIEUT. BARSTOW, 8TH REGT., LIEUT. PELLICHODY, DE WATTEVILLE'S REGT., ENSIGN C. LANGFORD, 82ND REGT.

Above these tablets:—

"DULCE ET DECORUM EST PRO PATRIA MORI"

30. "X" Stone Marker by the Niagara Historical Society, at the Town Hall. Location—Front steps in the Town of Niagara-on-the-Lake.

> Placed here by the Niagara Historical Society. Near this spot stood Government House built in the time of Governor Simcoe. Burned in the year 1812.

31. "X" Stone Tablet on the west front of the Town Hall, in the Town of Niagara-on-the-Lake.

> To comemorate the raising of the Niagara Light Dragoons which first assembled for service at this spot on 28th June 1812.
> Engagement of Corps Fort Erie 9th October 1812, Queenston 13th October 1812. Major Thomas Merritt, Commandant.

32. "X" Stone Tablet on the east front of the Town Hall, in the Town of Niagara-on-the-Lake.

> Niagara Court House
> Built in 1847
> For the United Counties of
> Lincoln, Welland and Haldimand.
> This inscription is placed here by the
> Niagara Historical Society
> 1902

33. Two Bronze Tablets placed on east face of stone wall of Old Fort Erie on either side of entrance to interior of Fort. Prepared by Historic Sites and Monuments Board of Canada, erected by Niagara Parks Commission.

Tablet on south side of entrance reads:—

> CAPTURE OF THE
> OHIO AND SOMERS
>
> Commemorating the
> Enterprise, skill and undaunted courage of Captain Alexander Dobbs and seventy officers and men of the Royal Navy and Royal Marines in capturing the United States ships of war, Ohio and Somers in Lake Erie, off this place, on the night of 12th-13th August, 1814.
>
> Erected 1933.

Tablet on north side of entrance reads:

> FORT ERIE
>
> These ruined walls and ramparts, built in 1805-1808, formed part of the Third Fort Erie. Dismantled in May, 1813, but rebuilt in January, 1814. On 3rd July, 1814, it surrendered to invaders who made it the strong point of an entrenched camp.
>
> Here their army, defeated at Lundy's Lane, fled for shelter. Unsuccessfully besieged by the British in August and September 1814. Evacuated on 5th November 1814.
>
> Erected 1933

34. Two Bronze Tablets commemorating the services of Butler's Rangers and the Action at Butler's Farm. Prepared by the Historic Sites and Monuments Board of Canada. Erected by Niagara Parks Commission. Unveiled, July 9, 1934. (Butler's Burying Ground).

BUTLER'S RANGERS

1777 - 1784

In enduring memory of the unflinching loyalty and valiant service of the Officers and Soldiers of Butlers' Corps of Rangers after striving dauntlessly for seven years to maintain the unity of the Empire and sacrificing all their wordly possessions they came as exiles into a wilderness to find new homes in this peninsula and to lay the foundation of a new Province under the British flag.

ACTION AT BUTLER'S FARM

On the 8th July 1813 an outpost of the invading force encamped near Fort George was defeated by a band of Six Nation and Western Indians led by Chief John Norton and Blackbird and Interpreters Michel Brisebois, Louis Langlade and Barnet Lyons.

Lieutenant Samuel Eldridge and 22 Soldiers of the 13th United States Infantry were killed and 12 taken prisoners.

35. "X" Bronze Tablet commemorating Treaties of Niagara, affixed to Memorial Hall, Niagara-on-the-Lake. Prepared by Historic Sites and Monuments Board of Canada. Erected by Niagara Parks Commission. Unveiled July 9, 1934.

TREATIES OF CANADA

Commemorating the Treaties concluded with the Chippawa and Mississauga Indians by Colonel Guy Johnson 9th May, 1781, and Lieut. Colonel John Butler 22nd May 1784 by which a great tract of fertile land extending westward from Niagara River to the mouth of Catfish Creek on Lake Erie, was purchased for the settlement of United Empire Loyalists, disbanded soldiers and expatriated Indians of the Six Nations. These Treaties were confirmed and the Boundary precisely defined by the Treaty at Navy Hall 7th Dec. 1792.

MEMORIAL ARCH INSCRIPTIONS

Inscriptions on the Pioneer Memorial Arch, complete, are as follows:

Mackenzie presents the seventh report of grievances
to the Commons House of Assembly, Upper Canada 1835

X X X

This memorial was erected to honour the memory of the men and women in this land throughout their generation who braved the wilderness, maintained the settlements, performed the common task without praise or glory and were the pioneers of political freedom and a system of responsible government which became the corner stone of the British Commonwealth of Nations.

X X X

Memento mori

charged with insurrection or treason
and executed in 1838-1839
Toronto
Peter Matthews Samuel Lount
Niagara District—James Moreau

London District—Hiram Benjamin Lynn, Daniel Davis Bedford, Albert Clark, Cornelius Cunningham, Joshua Gillam Doan, Amos Perley.

Kingston District—Silvester Lawton, Andrew Leeper, Joel Peeler Russell Phelps, Sylvanus Swete, Nils Sczoltevki Von Schoultz, Martin Woodruff, Duncan Anderson, Dorephus Abbey, Christopher Bulkley, Daniel George.

Montreal District—Joseph Narcisse Cardinal, Joseph Duquette, Charles Hindelang, Pierre Theophie Decoigne, Pierre Remi Narbonne, Charles Sanguinet, Ambrose Sanguinet, Francois-Marie-Thomas, Chevalier De Lorimer, Francois Nicolas, Joseph Robert Amable Daunais, Francois Xavier Hamelin.

X X X

At the top, on the outside face of the Arch, facing north

"And I sought for a man that should make up the
hedge and stand in the gap for the land".
(Taken from Ezekiel, Chap. 22, v. 30)

X X X

At the top, on the outside of the arch, facing south.

"The floods have lifted up, O Lord, the floods have
lifted up their voice."
(Taken from Psalm 93, v. 3)

EAST SIDE

This Arch was dedicated on the One Hundredth Anniversary of the rebellion of 1837-38 by The Right Honourable William Lyon Mackenzie King, C.M.G., P.C., M.A., LL.B., LL.D., Prime Minister of Canada. The Honourable Mitchell F. Hepburn, Prime Minister of Ontario.

THE NIAGARA PARKS COMMISSION

The Honourable T. B. McQuesten, K.C.,
Chairman.

Wm. L. Houck, M.L.A.	John C. M. German, K.C.
Dr. Geo. B. Snyder	Ross G. L. Harstone
Donald McGillivray	A. T. Whitaker
Fred W. Beard	Archie J. Haines, M.L.A.

General Manager
C. Ellison Kaumeyer

Tempora Mutantur Nos Et
Mutamur in Illis

WATER FOR QUEENSTON

Certain property owners of the Village of Queenston petitioned the Commission to provide a supply of water from the Commission's water main to Queenston Heights Park, and a delegation appeared before the Commission to support the petition. The Commission found that under the statute it has not the power to act as a supplier of water to a municipality.

The Commission noted to the deputation that the water main is not in a thoroughly satisfactory condition, being used principally for a summer supply for the Queenston Heights concessions. Negotiations in this matter were carried on later and the Commission decided that it could not supply the water as requested, having no authority so to do, but offered to co-operate as far as possible should the village make arrangements to obtain the water elsewhere, and would provide a site for a proposed reservoir.

Park Restaurant

While business was not so good at the Park Restaurant and as well in the concessions of the Commission, because of the recession in the United States and so far as sale of souvenirs and other goods is concerned, because of the U.S. regulation, based on that enforced by Canada, that tourists must have been away from the U.S. for 48 hours before being allowed to bring in tourist articles duty free, there was an operating profit very satisfactory under the circumstances. A new feature used during the year was the extended dining balcony. Especially in hot weather, this area is exceptionally popular, enabling persons to have their luncheon or evening dinner in full view of both the American and Canadian Falls. The locale for such a meal is unique in the world and proves particularly attractive to our United States visitors.

The Concessions of the Commission are also suffering through the loss of the former Upper Arch Bridge, which has not yet been replaced. With the erection of the proposed Rainbow Bridge at a site approximately 600 feet north of the former bridge, considerable more business should accrue, but this cannot be achieved before two years has elapsed. In the meantime, the traffic from the East enters Canada via the Peace Bridge at Fort Erie, the Whirlpool Rapids Bridge at the foot of Bridge Street in Niagara Falls, Ontario, and the Queenston-Lewiston Bridge at Queenston Ontario.,

The former pump house of the City of Niagara Falls, located next to the Table Rock House and long an eyesore, was demolished during the year. Owing to the depth of the old pit, much fill was needed before the area could be levelled and grassed. The change effected has greatly improved the appearance of Table Rock House grounds.

A permanent bit of work expected to prove of great value was the replacement of the slippery wooden walks in the Table Rock Tunnel under the Horseshoe Falls (which is one of the Commission's greatest tourist attractions, and a good revenue producer) by a concrete walk with roughened surface.

Other construction and decoration work of a permanent character was carried out as follows:

Apartment at Table Rock House was converted into a China show room, shelves for stock were placed in the Table Rock House attic.

Extra water lines were laid at Lundy's Lane Cemetery.

The office of the Park Restaurant Steward was partitioned and decorated and living quarters for the Steward (kitchen and bathroom) painted.

Curbing was laid around the Circular Drive and Entrance to Queenston Heights.

A new barrier was erected at No. 4 opening in the Table Rock Tunnel.

At the Park Restaurant the Ladies' Retiring Room and the Men's Lavatory were repainted. The outside of the Park Restaurant was painted, as was the Restaurant Dining Room woodwork.

The Niagara Glen Restaurant and Souvenir Store was redecorated.

At Hubbard's Point the fence was encased in mesh wire to provide safety for the children.

A new Platform was constructed at the Maid of the Mist Incline and the Incline itself put in excellent repair. A parapet wall and steps were constructed for safety.

Winter indoor work included construction of the concrete and wood double seat benches for the Oakes Garden Theatre.

A section of Service Road was constructed at Black Creek.

A new steel flagpole was erected at Queenston Heights.

Further work was carried on in connection with the Bridle path through Queen Victoria Park.

Cabinets were fitted for souvenir sale at the Whirlpool Rapids Building.

Neon signs were erected at the Clifton Gate House Building.

Guard rails were built at Paradise Grove and Larkin's Farm.

Additional cabinets were placed in the office of Mr. Broman, Superintendent of Arboriculture and in the Engineer's room, both in the Administration Building.

Repainting of the Administration Building was completed during the year.

An information tent was installed and maintained throughout the tourist season, giving not only information but contacting taxis when needed to take tourists to points of interest.

ENTERTAINMENT

During the year the following were entertained:

January —Scottish Curlers.
March —Hon. Mr. Dwyer, Minister of Mines, Nova Scotia and party.
April —Party of Scottish Doctors.
May —Islington Corinthian Football team of London, England.
July —W. P. McLaren, Cape Provincial Roads Engineer, South Africa.
August —Sir Earle and Lady Page, Deputy Prime Minister of Australia (who succeeded to the Premiership on the death of Rt. Hon. Joseph Lyons, who had previously been entertained.
British Air Mission, Mr. and Mrs. Handley Page.
Australian Trade Commissioner D. M. Dow, New York and Mrs. Dow.
H. R. Brown, Manager, Travel Department of the Bank of New South Wales, Sydney, Australia.
September—Wives of Mayors in attendance at Convention (Table Rock Trip).
Kitchener Daily Record Sales Carriers, Table Rock Trip.
Judge N. D. Macrossan, Senior Judge of the Queensland Supreme Court, Queensland, Australia.
February —Edmonton Grads. Basketball Team, Table Rock Tunnel Trip.

During the year the Niagara Falls City Council sent a delegation to the Commission and the questions taken up were licensing of taxis and sightseeing cars, Fire Protection from Niagara Falls to Queenston Heights, Floodlighting the War Memorial which is located on Commission property and the visit of Their Majesties. The Commission tendered to the Federal Government all its facilities for making the visit of Their Majesties to Niagara Falls on June 7, 1939, a pleasant one.

In keeping with the policy of securing pictures and books relating to the Niagara area as they come on the market and for staff use, the Commission during the year added a number of books to the Commission Library, to the library being formed in connection with the William Lyon Mackenzie home at Queenston and to the Horticultural Library for the use of the Apprentice Gardeners at the Bothy.

PARKS CONVENTION

Commissioner A. T. Whitaker was appointed delegate to represent the Commission at the Annual Convention of the American Institute of Park Executives and the American Park Society held at Milwaukee, Wis., in September. He submitted a comprehensive report on discussions at the Convention and on Highway and Park developments noted on the trip. Copies were made available for all Commissioners, who approved a recommendation that 16mm. color films of the floral beauties of Niagara Parks be made, to be available for publicity purposes. Commissioner Whitaker was authorized to secure the necessary materials and turn in two reels of 450 feet each.

BUS SERVICE

The Commission made arrangements with the Canada Coach Lines Ltd., to have a sightseeing service to the various concessions and points of interest in the Niagara Parks system. A bus stop was marked out in the neighbourhood of the Memorial Arch and tickets sold at the Clifton Gate House.

MOTOR CYCLE POLICE

The arrangements made with the Ontario Hydro-Electric Power Commission in connection with retaining of a motor cycle squad of Provincial Police terminated on March 31st, 1939. The Commission decided to retain two members of the Motor Cycle Squad to patrol the Niagara Parks Commission Parkways, which are 35 miles long and, in winter at times, dangerous because of ice condition.

The necessity of a motorized patrol was shown in the fact that the Whirlpool Rapids Building was twice entered and small thefts recorded, while thieves and vandals did damage at the Niagara Glen Restaurant and the Queenston Heights Park.

The Commission secured a lease of a portion of the land owned by the Ontario Hydro Electric Commission in the village of Chippawa lying between Water Street and the water's edge of Chippawa Creek, extending from the M.C.R.R. Bridge to Macklem's Lane.

Deeds, Leases and Agreements between the H.E.P.C. of Ontario and the Niagara Parks Commission were completed, covering land below the embankment leading to the Queenston-Chippawa Power Plant and forwarded to the Lieutenant-Governor-in-Council for approval.

NAVY ISLAND TAKEN OVER

The Commission received a lease from the Federal Department of Mines and Resources for Navy Island for 20 years. While no plans have been developed for its use, it was felt that the Island should not be allowed to fall into private hands. Navy Island, it will be recalled was the centre of activities during the Rebellion of 1837, the Fenian Raids and in more recent times, of rum runners during U.S. prohibition. The Island contains 316 acres.

Arbitrators awarded $1,150 to Clark Shipston for Part of Lot 17, Township of Niagara, this being the amount that the Commission had originally offered Mr. Shipston.

Gift of Seeds Appreciated

The Commission during the year received a collection of seeds from the New York Botanical Gardens and from the Botanical Gardens at Gothenburg, Sweden, these being mostly of a rare species. The Commission greatly appreciated these gifts, which will aid materially in the establishment of an arboretum upon which the Commission is now engaged. Since it takes many years to produce sizable trees from seeds, the results will not be available for years, but eventually Ontario will have, in the Niagara Parks Commission area, an arboretum which will fill a long-felt need in this Province.

The Commission also appreciated a gift through Commissioner A. T. Whitaker, of a copy of W. Perkin Bull's book, autographed by the author, "From Spring to Autumn".

The Commission expressed appreciation to the Buffalo Historical Society, which, through its Director, Robert Bingham, offered to loan certain museum articles, and an offer of co-operation from that society in connection with the formal opening of the reconstructed Fort Erie.

Enforcing the regulations against soliciting on the Parkways, four rooming house proprietors were prosecuted, and convictions secured.

The annual Niagara Parks Commission Scholarship awarded to the Niagara Falls Collegiate Institute and Vocational School was won by Gordon Barber, Third Year Technical.

Trees were planted on the golf course of the Niagara on the Lake Golf Club, aiding in beautifying the grounds, which are on properties of the Commission.

The Commission entered a float in the Blossom Week Parade at Grimsby and Beamsville on May 11th and received many favourable comments. It was prepared by the Horticultural Department.

Signs designating the names of creeks flowing across the Niagara Parkway will be erected as soon as convenient.

Complete financial statements, prepared by the staff and audited, follow this report, which is respectfully submitted to your Honour by,

Hon. T. B. McQuesten, *Chairman,*
Dr. G. B. Snyder, *Vice-Chairman,*
Hon. W. L. Houck, B.S., M.L.A.,
A. J. Haines, M.L.A.,
John C. M. German, K.C.,
Ross Harstone,
A. T. Whitaker,
Donald McGillivray.

Niagara Falls, Ontario,
March 27th, 1940.

NIAGARA PARKS COMMISSION

BALANCE SHEET

AS AT MARCH 31st, 1939

ASSETS

CURRENT

Cash on Hand		$ 1,700.00	
Canadian Bank of Commerce, Niagara Falls			
Chairman's "A" Account	$ 159,728.83		
Chairman's "C" Account	428,513.27		
	$ 588,242.10		
Less: Current Account	52,024.01		
Less: Payroll Account	6,421.18		
		529,796.91	
Accounts Receivable		2,422.59	
Inventories of Supplies and Souvenirs		68,108.34	
			$ 602,027.84
WATER RENTALS, EARNED			27,932.49

RESERVE FUND

Sinking Fund Provision for $5\frac{1}{2}\%$ 15 year Debentures due 1st August, 1947:		
Deposit with the Treasury Department of Ontario as at December 1st, 1938	$ 105,434.83	
Accrued Interest thereon	1,405.80	
(Deducted from Debenture Issue)	$ 106,840.63	

PROPERTY

Land, Buildings and Improvements, cost	$5,546,168.89		
Less: Reserve for Depreciation	1,347,380.73		
		$4,198,788.16	
Office and Restaurant Equipment, cost	$ 134,878.23		
Less: Reserve for Depreciation	109,521.21		
		25,357.02	
Cars and Trucks, cost	$ 16,006.57		
Less: Reserve for Depreciation	11,137.98		
		4,868.59	
Miscellaneous Equipment and Tools, cost	$ 31,241.70		
Less: Reserve for Depreciation	27,184.09		
		4,057.61	
Tableware, Linens and Utensils, cost	$ 32,594.41		
Less: Reserve for Depreciation	27,239.67		
		5,354.74	
			4,238,426.12

DEFERRED CHARGES

Payment made by the Commission in 1932 to the City of Niagara Falls in respect to the removal of the City Water Works from the Park properties	$ 50,000.00		
Less: Written off	36,666.66		
		$ 13,333.34	
Discount on Debentures	$ 87,820.00		
Less: Written off	48,400.00		
		39,420.00	
Expenses in re New Bridge Approaches		9,242.03	
Inventories of Expense Items		7,527.77	
Unexpired Insurance		3,078.32	
			72,601.46
			$4,940,987.91

LIABILITIES

CURRENT			
Accounts Payable			$ 3,240.68
FUNDED DEBT			
2% Notes, Guaranteed by the Province of Ontario, Payable 21st December, 1940, $500,000.00 each, numbered 1 to 5	$2,500,000.00		
Accrued interest thereon	13,698.63		
		$2,513,698.63	
4% Instalment Gold Debentures, Guaranteed by the Province of Ontario, Payable 1st December, 1928-1947	$2,000,000.00		
Less: Redeemed	905,000.00		
	$1,095,000.00		
Accrued interest thereon	14,600.00		
		1,109,600.00	
5½%, 15 year Debentures, Guaranteed by the Province of Ontario, due 1st August, 1947	$ 300,000.00		
Accrued interest thereon	2,750.00		
	$ 302,750.00		
Less: Amount of Sinking Fund	106,840.63		
		195,909.37	
			3,819,208.00
RESERVE—Public Liability			29,208.61
SURPLUS			
As at April 1st, 1938		$2,187,634.06	
Deduct: International Railway Company Arbitration, Award, and Legal, Engineering and other costs incurred to date, less proceeds of sale of property		1,198,152.53	
		$ 989,481.53	
Add: Excess of Revenue over Expenditure for the year		99,849.09	
			1,089,330.62
CONTINGENT—Interest in re International Railway Company Arbitration. (See Report).			
COMMITMENTS			
(A) To purchase certain lands.			
(B) To complete certain improvements.			
(C) To pay pensions of about $75.00 per month.			
			$4,940,987.91

REVENUE AND EXPENDITURE FOR YEAR ENDED 31st MARCH, 1939

REVENUE

	YEAR ENDED March 31, 1939	YEAR ENDED March 31, 1938
OPERATING REVENUE OR *LOSS* (before Depreciation):		
Table Rock House	$ [illegible]3,111.60	$ 71,989.05
Park Restaurant	6,941.13	8,889.45
Clifton Incline	1,589.59	3,055.30
Queenston Restaurant	37.38	1,389.94
Niagara Glen Restaurant	628.63	*47.72*
Brock's Monument	3,099.34	3,671.78
Whirlpool Rapids Incline Store	*118.11*	1,956.93
Clifton Gate Store	4,122.48	4,212.48
	$ 59,412.04	$ 95,117.21
Less: Depreciation on Equipment and Utensils	5,464.54	5,349.33
NET OPERATING REVENUE	$ 53,947.50	$ 89,767.88
Water Rentals	498,462.31	505,643.63
Privileges, Tolls and Fees	16,696.98	17,266.50
Cash Discount	1,390.91	2,481.63
Sundry Revenue	539.44	994.99
TOTAL REVENUE	$571,037.14	$616,154.63

EXPENDITURE

Maintenance and Upkeep of Parks and Grounds	$169,926.73	$173,601.17
Salaries and Expenses of Guards and Caretakers	23,663.58	22,542.30
Administration Expenses	25,926.63	26,635.30
Miscellaneous Expenses	21,648.75	18,535.68
Special Grants	11,750.00	9,037.50
Interest on Debentures	59,031.96	64,668.60
Interest on Bank Loans and Notes	48,337.41	32,033.77
Discount on Debentures	4,583.00	4,654.37
American Currency Exchange	987.23	386.34
Depreciation on Sundry Tools and Equipment	5,332.76	5,015.67
Depreciation on Buildings and Improvements	100,000.00	100,000.00
TOTAL EXPENDITURE	$471,188.05	$457,110.70
Excess of Revenue over Expenditure	99,849.09	159,043.93
	$571,037.14	$616,154.63

SCHEDULE 1

SCHEDULE OF LANDS, BUILDINGS AND IMPROVEMENTS AS AT MARCH 31st, 1939

Lands and Improvements:		
Butler's Burial Ground	$ 5,354.78	
Parkway North (Fort George to Niagara Falls)	983,519.71	
Queenston Heights Park	163,953.90	
Niagara Glen	42,981.17	
Lundy's Lane Burial Ground	6,744.61	
Queen Victoria Park	1,084,994.18	
Parkway South (Queen Victoria Park to Fort Erie)	1,209,238.56	
Fort Erie Park	7,625.39	
Town of Fort Erie	192,296.22	
Fort Erie to Old Fort	21,397.61	
Town of Niagara-on-the-Lake	18,037.25	
City of Niagara Falls	227,713.98	
Queenston to Niagara Falls	136,806.71	
Fort George to Queenston	12,175.87	
		$4,112,839.94
Buildings:		
Queenston Restaurant	$ 18,188.66	
Queenston Souvenir Store	4,754.94	
Queenston Creche	8,173.03	
New Queenston Restaurant—Plans	1,158.00	
Queenston Swimming Pool and Bath Houses—Plans	208.04	
Lecture Hall for Training School	2,750.99	
Residence for Apprentices	29,066.67	
Niagara Glen Inn	31,094.49	
Administration Building	97,392.23	
Park Restaurant	318,286.95	
Table Rock House	287,025.92	
Dufferin Island Refreshment Stand	424.78	
Fort Erie Pavilion	9,197.24	
Garden Theatre	363,056.08	
Information Building	22,088.72	
Memorial Arch	36,077.89	
W. L. Mackenzie Building	24,623.58	
Restoration of Fort, Niagara-on-the-Lake	96,991.05	
Restoration of Navy Hall, Niagara-on-the-Lake	15,902.86	
Restoration of Fort, Fort Erie Park	61,092.54	
Garage—Queenston to Niagara Falls	4,931.04	
Poultry House—Queenston to Niagara Falls	843.25	
		1,433,328.95
TOTAL		$5,546,168.89

SCHEDULE 2

OPERATING ACCOUNTS
FOR YEAR ENDED 31st MARCH, 1939

	Receipts Sales	Cost of Sales	GROSS PROFIT Amount	GROSS PROFIT % of Cost
Table Rock House and Lunch Room:				
Elevator	$ 39,246.50	....	$39,246.50	....
Souvenirs	45,717.76	$19,445.04	26,272.72	135.11
Linen, Woollens and China	25,897.59	15,307.20	10,590.39	69.18
Lunch Room	1,962.13	1,366.83	595.30	43.55
Confectionery	5,190.72	3,741.56	1,449.16	38.73
Tobacco	1,428.36	1,251.32	177.04	14.15
	$119,443.06	$41,111.95	$78,331.11	
Commissions paid		$ 7,027.40		
Salaries and other expenses		28,192.11		
			35,219.51	
Operating Revenue (before Depreciation)				$43,111.60

	Receipts Sales	Cost of Sales	GROSS PROFIT Amount	GROSS PROFIT % of Cost
Park Restaurant:				
Dining Room	$ 42,245.75	....	....	....
Lunch Room	9,719.21	....	....	....
	$ 51,964.96	$30,140.85	$21,824.11	72.41
Souvenirs	6,375.82	3,062.96	3,312.86	108.12
Confectionery	1,419.83	1,243.78	176.05	14.15
Tobacco	1,540.93	1,323.49	217.44	16.44
	$ 61,301.54	$35,771.08	$25,530.46	
Salaries and other expenses			18,589.33	
Operating Revenue (before Depreciation)				$ 6,941.13

	Receipts Sales	Cost of Sales	GROSS PROFIT Amount	GROSS PROFIT % of Cost
Clifton Incline:				
Railway	$ 2,661.00	....	$ 2,661.00	....
Souvenirs and other sales	2,390.40	$ 1,301.93	1,088.47	83.60
	$ 5,051.40	$ 1,301.93	$ 3,749.47	
Salaries and other expenses			2,159.88	
Operating Revenue (before Depreciation)				$ 1,589.59

	Receipts Sales	Cost of Sales	GROSS PROFIT Amount	GROSS PROFIT % of Cost
Queenston Restaurant:				
Dining Room	$ 1,971.60	....	....	....
Miscellaneous Sales	7,087.63			
	$ 9,059.23	$ 6,136.16	$ 2,923.07	47.64
Piano Rental	8.00	....	8.00	....
	$ 9,067.23	$ 6,136.16	$ 2,931.07	
Salaries and other expenses			2,893.69	
Operating Revenue (before Depreciation)				$ 37.38

	Receipts Sales	Cost of Sales	GROSS PROFIT Amount	GROSS PROFIT % of Cost
Niagara Glen Inn:				
Dining Room	$ 3,005.57	$ 2,128.22	$ 877.35	41.23
Souvenirs	1,567.02	770.94	796.08	103.24
	$ 4,572.59	$ 2,899.16	$ 1,673.43	
Salaries and other expenses			1,044.80	
Operating Revenue (before Depreciation)				$ 628.63

	Receipts Sales	Cost of Sales	GROSS PROFIT Amount	GROSS PROFIT % of Cost
Whirlpool Rapids Incline Store:				
Souvenirs	$ 6,949.82	$ 3,762.12	$ 3,187.70	84.76
Sales	920.21	771.08	149.13	19.34
	$ 7,870.03	$ 4,533.20	$ 3,336.83	
Niagara Concessions, 15% of Souvenir Sales		$ 1,135.29		
Commissions paid		95.70		
Salaries and other expenses		2,223.95		
			3,454.94	
Operating *LOSS* (before Depreciation)				$ *118.11*

	Receipts Sales	Cost of Sales	GROSS PROFIT Amount	GROSS PROFIT % of Cost
Clifton Gate Store:				
Souvenirs	$ 14,568.45	$ 6,957.91	$ 7,610.54	109.38
Miscellaneous Sales	3,278.36	2,156.28	1,122.08	52.04
	$ 17,846.81	$ 9,114.19	$ 8,732.62	
Salaries and other expenses			4,610.14	
Operating Revenue (before Depreciation)				$ 4,122.48

Brock's Monument:		
Gross Receipts from tolls	$ 3,581.35	
Salaries and other expenses	482.01	
Net Operating Revenue		$ 3,099.34

SCHEDULE 3

REVENUE FROM WATER RENTALS FOR YEAR ENDED 31st MARCH, 1939

	YEAR ENDED March 31, 1939	YEAR ENDED March 31, 1938
From Canadian Niagara Power Company:		
Fixed	$ 15,000 00	$ 15,000 00
Additional	58,667 96	46,160 43
	$ 73,667 96	$ 61,160 43
From Ontario Power Company:		
Fixed	$ 30,000 00	$ 30,000 00
Additional	59,836 14	71,132 87
	$ 89,836 14	$101,132 87
From Electrical Development Company:		
Fixed	$ 15,000 00	$ 15,000 00
Additional	56,560 48	62,956 54
	$ 71,560 48	$ 77,956 54
From Hydro-Electric Power Commission	$263,397 73	$265,393 79
TOTAL	$498,462 31	$505,643 63

SCHEDULE 4

REVENUE FROM PRIVILEGES TOLLS AND FEES FOR YEAR ENDED 31st MARCH, 1939

	YEAR ENDED	
	March 31, 1939	March 31, 1938
From Niagara Spanish Aero Car Company	$ 3,500.00	$ 3,500.00
From Maid-of-the-Mist Steamboat Company	2,500.00	2,500.00
Fees from Lundy's Lane Burial Ground	326.00	304.00
Tower Optical Company—Binoculars	2,314.40	2,634.35
Niagara Concessions Limited—Rent	1,000.00	1,000.00
	$ 9,640.40	$ 9,938.35
From Bus Companies:		
Van Dyke, Sight-Seeing	$ 717.22	$ 695.75
Gray Coach Lines	2,177.36	1,863.30
Highway King Coach Lines, Limited	3,557.40	4,463.18
Sundry	604.60	305.92
	$ 7,056.58	$ 7,328.15
TOTAL	$16,696.98	$17,266.50

SCHEDULE 5

MAINTENANCE AND UPKEEP OF PARKS PARKWAYS AND GROUNDS FOR YEAR ENDED 31st MARCH, 1939

	YEAR ENDED	
	March 31, 1939	March 31, 1938
Butler's Burial Ground	$ 473.55	$ 474.95
Town of Niagara-on-the-Lake	231.01	87.11
Queenston Heights Park	10,656.50	10,609.80
Queenston to Niagara Falls	38,187.45	48,683.92
Niagara Glen	1,886.27	2,428.19
City of Niagara Falls	21,563.59	12,147.62
Lundy's Lane Burial Grounds	2,338.95	2,112.09
Queen Victoria Park	70,680.83	72,112.12
Queen Victoria Park to Fort Erie	14,708.11	12,891.59
Town of Fort Erie	1,979.97	210.68
Fort Erie Park	1,426.43	1,485.83
Fort George to Queenston	5,794.07	10,357.27
TOTAL	$169,926.73	$173,601.17

SCHEDULE 6

SALARIES AND EXPENSES OF GUARDS AND CARETAKERS FOR YEAR ENDED 31st MARCH, 1939

Butler's Burial Ground	$ 89.60	$ 94.40
Fort George to Queenston	928.34	918.80
Queenston Heights Park	2,111.32	1,662.05
Niagara Glen	1,607.38	1,033.34
Queenston to Niagara Falls	1,715.55	751.41
Lundy's Lane Burial Grounds	1,688.63	1,578.26
Queen Victoria Park	9,442.91	13,909.49
Queen Victoria Park to Fort Erie	2,847.09	1,582.76
Fort Erie Park	187.60	238.60
City of Niagara Falls	3,045.16	773.19
TOTAL	$23,663.58	$22,542.30

SCHEDULE 7
ADMINISTRATION EXPENSES
FOR YEAR ENDED 31st MARCH, 1939

Executive and Office Salaries	$19,907.88	$20,094.32
Office Supplies	1,279.85	894.44
Office Expense	2,018.97	2,254.68
Travelling Expenses	1,202.60	1,961.47
Commissioners' Expenses	1,517.33	1,430.39
TOTAL	$25,926.63	$26,635.30

SCHEDULE 8
MISCELLANEOUS EXPENSES
FOR YEAR ENDED 31st MARCH, 1939

	YEAR ENDED	
	March 31, 1939	March 31, 1938
Insurance	$ 2,324.57	$ 2,769.34
Advertising	14,198.03	12,630.92
Pensions	900.00	900.00
Professional Services	1,717.03	*346.19*
Exchange on Bond Coupons and Bonds	100.84	177.10
Contribution to Superannuation Fund	2,408.28	2,404.51
TOTAL	$21,648.75	$18,535.68

SCHEDULE 9
GRANTS AND SPECIAL CHARGES
FOR YEAR ENDED 31st MARCH, 1939

Stoney Creek Battleground—Grant	$ 800.00	$ 800.00
Niagara Falls General Hospital—Grant	....	200.00
Board of Illumination	5,625.00	2,812.50
City of Niagara Falls, re Water Works, portion written off	5,000.00	5,000.00
Niagara Falls, Vocational School	25.00	25.00
Niagara Falls, Chamber of Commerce	250.00	200.00
Niagara Falls, Trades and Labour Council	50.00	....
TOTAL	$11,750.00	$ 9,037.50

SCHEDULE 10
CAPITAL EXPENDITURE
FOR YEAR ENDED 31st MARCH, 1939

Town of Niagara-on-the-Lake:		
Fort George—Restoration	$92,893.30	
Navy Hall—Restoration	15,716.29	
Navy Hall—Landscaping and Wall	3,660.94	
Navy Hall—New Roadway	5,814.82	
		$ 118,085.35
Fort George to Queenston:		
Lands	$ 6,581.54	
Service Roads	209.30	
Wm. Lyon Mackenzie Building	10,400.63	
Wm. Lyon Mackenzie Building—Landscaping and Wall	2,667.35	
		19,858.82
Queenston to Niagara Falls:		
2″ Water-line to Mackenzie Building	$ 1,390.33	
School Residence	461.52	
Garage	815.90	
Roadway and Gate at Nursery	540.66	
Arboretum	470.70	
Widening River Road and Protective Fence	817.96	
Parapet Wall	4,361.61	
Sidewalk along Parapet Wall	780.86	
Poultry House	843.25	
		10,482.79
Niagara Glen:		
Niagara Glen Restaurant Annex	$ 6,177.96	
Transformer House and Line	998.39	
		7,176.35
City of Niagara Falls:		
Widening River Road and Protective Fence	$ 2,321.76	
Lands	1,600.98	
Memorial Arch	146.05	
Clifton and Lafayette Hotel Sites	6,206.66	
		10,275.45

Queen Victoria Park:		
Park Restaurant—Verandah Extension	$ 322.34	
Fill at I. R. C. Intake	3,875.95	
New Roadway, Table Rock House to Dufferin Island	2,652.85	
Cable Line T. R. House to I. R. C. Power House	296.02	
		7,147.16
Queen Victoria Park to Fort Erie:		
Service Roads		12.05
Town of Fort Erie:		
Resurfacing Road	$ 66.81	
Lands	5,633.11	
Mather Park	28,635.14	
		34,335.06
Fort Erie Park:		
Fort Erie—Restoration	$60,697.84	
Road Entrance at Park	4,703.69	
Alteration to Pavilion	1,946.52	
		67,348.05
TOTAL		$274,721.08

SCHEDULE 11

STATEMENT OF APPLICATION OF FUNDS, CURRENT BALANCE SHEET ITEMS AND GROSS PROFITS

FOR YEAR ENDED 31st MARCH, 1939

FUNDS PROVIDED

Current Assets as at April 1st, 1938	$ 123,547.29
Issue of 2% Notes, Payable 21st December, 1940	2,500,000.00
Gross Profits for the year	220,229.39
	$2,843,776.68

FUNDS EXPENDED

Additions to Lands, Buildings and Improvements	$ 274,047.03
Additions to Office, Restaurant and other Equipment	16,850.45
Reduction of Debenture Indebtedness	117,698.04
Paid in re International Railway Company Arbitration	5,107.53
Paid Canadian Bank of Commerce Note, dated December 3rd, 1937, together with interest thereon to March 31st, 1938	1,080,822.92
Paid certain expenses in re New Bridge Approaches	7,244.57
Discharge current liabilities as at April 1st, 1938	735,729.03
Current Assets as at March 31st, 1939	640,566.42
	$2,878,065.99
Less: Current liabilities as at March 31st, 1939	34,289.31
	$2,843,776.68

CURRENT BALANCE SHEET ITEMS

	YEAR ENDED	
ASSETS	March 31, 1939	March 31, 1938
Cash on Hand	$ 1,700.00	$ 1,250.00
Canadian Bank of Commerce	529,796.91	....
Accounts Receivable—General	2,422.59	1,133.82
Accounts Receivable—Water Rentals	27,932.49	64,480.58
Inventories of Supplies and Souvenirs	68,108.34	46,144.01
Inventories of Expense Items	7,527.77	10,538.88
Unexpired Insurance	3,078.32	....
	$640,566.42	$123,547.29

LIABILITIES

Canadian Bank of Commerce	....	$677,071.53
Accounts Payable	$ 3,240.68	39,987.50
Accrued Interest on Notes and Debentures	31,048.63	18,670.00
	$ 34,289.31	$735,729.03

GROSS PROFITS

Provision for Depreciation on Lands, Buildings and Improvements	$100,000.00
Provision for Depreciation and Wastage on Office, Restaurant and Other Equipment	10,797.30
Written off a payment of $50,000.00 made to the City of Niagara Falls in 1932 for removal of Water Works ($13,333.34 still to be written off)	5,000.00
Written off Discount on Debentures	4,583.00
Net Profit—Added to Surplus	99,849.09
	$220,229.39

Ontario Research Foundation

REPORT

For the Year 1939

Presented by the Chairman
to the Lieutenant-Governor in Council
December, 1939

PRINTED BY ORDER OF
THE LEGISLATIVE ASSEMBLY OF ONTARIO
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ONTARIO

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1940

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February 15th, 1940.

THE HONOURABLE MITCHELL F. HEPBURN, M.P.P.,
Prime Minister of Ontario,
Parliament Buildings, Toronto.

DEAR SIR:

I have pleasure in handing you herewith the Report of the Director, Dr. Speakman, to me, covering the activities of the Foundation through the year just closed.

We have been through an unusual year resulting from the necessary modifications to meet specific war requirements. Having regard to what has subsequently transpired it was the good fortune of Mr. Ellis, our Director of Metallurgy, and myself to spend several weeks in England in the late summer as members of a representative Canadian delegation of manufacturers and technical experts. Among other places visited a considerable amount of time was devoted to research laboratories actively engaged in vitally important work.

We have handled a greater volume of work this year than ever before in our history and finish the year with a slight surplus and in such form, both with regard to staff and equipment, that I know the Ontario Research Foundation will give a good account of itself in 1940.

I heartily commend the careful reading of the Director's Report to Members of the Legislature and to those engaged in Industry and Agriculture.

I have the honour to be,

Your obedient servant,

E. HOLT GURNEY,

Chairman.

REPORT OF THE DIRECTOR OF RESEARCH, 1939

TO E. HOLT GURNEY, ESQ.,
Chairman

DEAR SIR:

Before attempting to review the work of this Foundation during the year 1939, I should like to express on behalf of the staff our sense of loss associated with the death of two men who had been with us from the beginning.

Sir Joseph Flavelle, our late Chairman, for ten years followed with the closest interest not only the work of this Foundation as a whole but the work of the individual. By attendance at our staff meetings and visits to the laboratories he gave liberally to all of us the encouragement which such interest brings, and also the stimulus of kindly but penetrating criticism. Quick to recognize superficial observation or faulty reasoning, he combined with a passion for sound work a natural sympathy with the spirit of scientific enquiry.

Early in the year our colleague Dr. Douglas Barbour passed away, and the Foundation lost the services of a brilliant and faithful servant. First as a Fellow and later as a Director he threw his boundless energy and keen mind into the task of building up our Biochemical Department. His record at the University testified to his scientific ability and he never wandered from its standards. At the same time his ability to enter into the life and problems of those engaged in industry, combined with an earnest desire to apply science, made it possible for him to accomplish remarkable results in several fields. We should like to record not only his ability but his warm and generous friendship.

Under normal circumstances it is difficult to give complete and therefore interesting accounts of much of the work going on in the laboratories. Part of it is based on facts and situations which involve a confidential relationship. Our own researches often lead us into the patent field, and until this long and uncertain road ends we are forbidden by law to describe the work. This year a further limitation confronts me as I commence the story of our work. For more than a year we have prepared quietly to meet what seemed to be future demands on our facilities in connection with war problems. Now we are in the midst of a period of readjustment to enable actual work to be done. It is not possible to discuss this in detail, but I feel justified in stating that the Foundation is playing a useful part which will increase in importance in the future. I should like to refer to the spirit of cooperation which has characterized the staff as a whole in the discharge of these duties.

The revenue for the year expresses in a concise form the fact that it has been a busy time. Each Department has shared in this growth, and under more normal conditions it would be necessary to provide for a marked increase in staff if we are to continue active work along fundamental lines. In so far as we are able this problem will be faced in the coming year without neglecting in any way the duties to which I have referred above.

AGRICULTURE

Staff: Mr. Jarvis, Mr. Chapman, Dr. Skey

As part of our research programme in relation to the major crops of Ontario, one member of the staff has continued his study of the apple orchards in Southern Ontario. In the previous year an attempt was made to correlate yield and quality with the distribution of varieties and in relation to soil type. This year we have concentrated on the significance of rainfall and available moisture. It has been found that even in districts where the rainfall was ample, low yields were resulting from an actual lack of moisture due to an absence of materials in the soil which tend to retain moisture. On the other hand, examples are available of good crops in districts which have a lower rainfall or shallow soils. This success is associated with cultural methods designed to conserve moisture.

Further observations have been made in connection with injury to peach trees in the Niagara district. This problem has been the subject of prolonged litigation, and it is becoming increasingly important to determine with scientific accuracy the conditions which may produce injury to any of our major crops as a result of industrially produced gases in the atmosphere.

Our investigations into the physiography of Eastern Ontario have been completed, and the report is ready for publication. A commencement has been made on the compilation of similar basic information concerning the agricultural section of Northern Ontario. The meteorological section has been completed. To assist in the classification of soil types in the southern section a detailed study of the district north of Guelph was undertaken.

During the summer and early autumn the staff completed their survey of the soil types of Eastern Ontario. A soil map of the region is in course of preparation. During the remaining winter months we shall complete the analysis of 465 soil samples collected during the survey.

From time to time the opportunity arises to put to practical use the information now available concerning the climate and soils of Southern Ontario. A man who recently came from Hungary to reside in Ontario was anxious to know whether suitable locations were available for growing a variety of red pepper which is successfully grown in the Szezed district in Hungary. Knowing the characteristics of this region it seemed a comparatively simple task to appraise the various regions of Southern Ontario from this point of view. Later it was found that the most suitable area was that devoted to peaches, and this introduces economic considerations into the picture. Both in land settlement and in the gradual readjustment of our agricultural economy to prevailing conditions the results of our ten years' work will prove to be of great value.

In an effort to establish correlation between the climate and soils of Eastern Ontario with the dominant type of agriculture in the region, namely, cheese production, a preliminary survey of 90 farms of various sizes and in different localities has been made. This survey is economic in character, and is essential before any practical recommendations can be made to the farmers. We have received splendid cooperation in this work both from the farmers and those in charge of cheese factories which are dotted throughout this part of the Province.

Charts showing the following basic data concerning the population of Southern Ontario will shortly be completed and made available in published form:

1. Percentage of total land improved—for 1911, 1921 and 1931.
2. Total population to one square mile of total area—for 1911, 1921 and 1931.
3. Increases in total population to one square mile of total area—for 1901-1911, 1911-1921 and 1921-1931.
4. Decreases in total population to one square mile of total area—for 1901-1911, 1911-1921 and 1921-1931.
5. Total population to 100 acres of improved land for 1911, 1921 and 1931.
6. Increases in total population to 100 acres of improved land for 1911-1921 and 1921-1931.
7. Decreases in total population to 100 acres of improved land for 1911-1921 and 1921-1931.
8. Rural population to 100 acres of improved land for 1911, 1921 and 1931.
9. Increases in rural population to 100 acres of improved land for 1911-1921 and 1921-1931.
10. Decreases in rural population to 100 acres of improved land for 1911-1921 and 1921-1931.
11. Urban population to 100 acres of improved land for 1911, 1921 and 1931.
12. Increases in urban population to 100 acres of improved land for 1911-1921 and 1921-1931.
13. Decreases in urban population to 100 acres of improved land.

This investigation has been time-consuming, and to the worker rather tedious. I feel, however, that this information will be of great value not only to research workers in agriculture, but also to some in the fields of sociology and economics.

PATHOLOGY AND BACTERIOLOGY

Staff: Dr. Hadwen, Dr. Fallis

In response to a request from the Northwest Territories Council of the Federal Government the Foundation granted leave of absence to Dr. Hadwen during the summer and early autumn. He was asked to make an extended trip through the West and to the Arctic in order to inspect and report upon the condition of wild life in two of the National Parks and of the reindeer herd which is being developed in the vicinity of Aklavik. His previous experience in Alaska and in Scandinavia and his sustained interest in problems of this nature have enabled him to assist in directing along successful lines a project which may prove to be of the greatest value to the native population in this part of Canada. Since his return Dr. Hadwen has examined and reported upon the tissue material, etc., which he collected. A complete report embodying his recommendations has also been forwarded to the Federal Committee.

A report of the work of the Department on bovine mastitis has been published. It is a detailed account of the methods and observations which form the basis of a microscopic method for the diagnosis of this disease. In earlier reports I have discussed the economic aspects of the disease, and through contact with breeders and farmers we learn that the problem is increasing rather than otherwise. Our hope is that this work will assist the practicing veterinarian in his efforts to locate the disease in its early stages and prevent its rapid spread through the herds. During the year the method has been successfully used in careful tests of a few private herds, including two in Western Canada from which Dr. Hadwen was able to secure samples of milk. It is interesting to record that the five samples of reindeer milk collected were all free from infection. The samples secured from range cattle indicated a complete freedom from mastitis except in cases where animals had been used for show purposes, and thus brought into contact with other animals. These few observations are suggestive of some connection between the disease and the conditions under which the average domesticated herd is kept.

Our investigation of the life history of the sheep parasite *Oestrus ovis* has been continued. Young lambs were infected with the larvae of the parasite and killed at intervals. Information has been obtained regarding the rate of growth of the parasite. It has been shown experimentally that the rate of growth is independent of the temperature of the atmosphere, and the problem remains as to why the larvae grow more rapidly in summer than in winter.

Trichinosis is a parasitic disease of hogs which can be transmitted to the human. Experiments have been carried out, using rats as test animals, to determine whether the larvae of the parasite can pass through the intestinal tract instead of remaining there and growing to maturity. Further, whether the larvae passed in fecal material are sources of infection to other animals. This work is an attempt to explain how 1 per cent. of grain-fed hogs in Canada became infected if the parasite is only transmitted through material of animal origin.

Rapid progress is being made in observing and recording the life cycle of a parasitic fly which attacks and ultimately destroys the larvae of the webbing clothes moth. It is too early to express any opinion as to whether the parasite could be used effectively to reduce the annual losses due to the damage to textile materials caused by moths. This rather novel approach to the problems of pest control is being successfully used, particularly in Australia.

The laboratory continues to examine and report upon specimens forwarded to us by the Provincial Department of Game and Fisheries and other public bodies. It has also rendered effective assistance to our industrial laboratories in the solution of problems involving pest control, food contaminants, and the production of compounds with antiseptic or germicidal properties. The moth colony continues to supply the means for standard tests of commercial mothproofing compounds.

TEXTILES

Staff: Dr. Goodings, Dr. McKay, Mr. Staples, Mr. Turl

The work of this Department may be classified under three heads: research in fundamental problems of the textile industries, short-time problems submitted by manufacturers, and testing. It is most gratifying to report that in all branches the past year has been one of increased activity and satisfactory results. Our relationship with individual firms and with the Associations of manufacturers reflects, I feel, their increasing confidence in our ability to serve them. This is the cheerful aspect of a situation which creates new problems, *e. g.*, the increasing amount of the working day occupied by telephone calls, interviews and correspondence. Our hope is that the steadily increasing revenue of the Department will permit staff additions sufficient to prevent any harmful effects on essential work.

The following brief account contains ample evidence that our real contribution to progress must rest on years of patient and sometimes disappointing research into the fundamentals. It is on this broad basis that new processes and new basic raw materials are being developed in other textile industries. Canada cannot afford for ever to pay toll on so many of the essentials of these important industries. The period of technical progress is over and the results justify a courageous advance into the research field. The support given during recent years to the Department creates a hopeful outlook in this regard.

The physical equipment of the laboratories has been increased by the addition of several machines used in the physical examination of fibres and fabrics. Amongst these are an additional Fadeometer and a horizontal strength and elongation tester. The urgent need for the former is indicated by the fact that the original instrument was "booked" for months ahead. Our older strength-testing equipment is American in design and construction. Recently we have installed a machine which enables tests to be performed according to British standards and specifications. It has already proved of great value at a time when speed is of prime importance to manufacturers who wish to determine the quality of samples.

The general testing and short-term investigation work of the Department have increased by approximately 60 per cent. during the year. A most encouraging feature of this increase is the fact that 45 firms have used the laboratories for the first time. In order to convey some idea of the type and importance of the problems which are coming to the Foundation each day, I am including the following brief notes concerning typical cases.

A firm had been submitting samples of cloth to a large user in the Province. These samples were being tested on a generally recognized wear-testing machine. Cloth which the manufacturer regarded as satisfactory was being rejected and the Foundation was asked to cooperate with both parties in an effort to straighten out the trouble. We found a considerable variation in the results obtained under what were supposedly standard conditions. New factors came to light and were discussed, with the result that qualitative agreement between test results could be obtained. The investigation only served to emphasize the need for a test which will measure accurately and quickly the qualities in a fabric which control it.

A manufacturer was faced with a sudden and quite alarming increase in the percentage of his product which failed to measure up to standard. We had on an earlier occasion cooperated with the firm and were thus acquainted with the general principles controlling his operations. When this trouble developed it was natural that the question of adherence or otherwise to these principles should be enquired into. At one stage of the process the acidity of a bath is the primary cause of success or failure. The following figures represent readings taken in the plant during one hour:

2.8 *2.8* 4.3 *6.5* *6.3* 3.9

Four out of the six readings are below or above the optimum acidity. This example illustrates a cause of trouble and loss which can be eliminated by either careful personal supervision or the installation of suitable automatic equipment. It also illustrates the value of the steadily growing technical experience of our staff.

A manufacturer submitted samples of a fabric which was intended for an important branch of war service. It was tested according to standard methods, using apparatus constructed in our machine shop. The fabric failed to meet the specifications. Some time later, after correspondence and conferences with the staff, a sample was submitted which embodied the results of this collaboration. Further tests showed that the essential quality had been increased by three hundred per cent.

For many years it has been the accepted custom in Great Britain to refer differences of opinion to the Bradford Conditioning House or the Manchester Testing House associated with the Cotton Exchange. From time to time problems of a similar nature are referred to the Foundation by the Board of Trade or the Textile Associations. The grading of wool as normally carried out calls for training and experience, and there are no officially accepted standards in Canada to guide in determining quality. In this field especially advantage is being taken of the services of a competent and independent laboratory such as ours, where scientific measurement is used as a basis of quality determination.

During the past seven years I have referred to the establishment and gradual growth of what is now widely known throughout Canada as the Quality Control Plan. This work, which originated with Courtauld's (Canada) Ltd., has now participating in it a group of firms producing knitted garments, and more recently a larger group of manufacturers of woven fabrics of many types and garments. The contribution of the Foundation is two-fold. We are responsible for the specifications and the testing of all materials submitted for approval under the Plan. Secondly, we purchase on the open market representative materials and submit these to an independent and rigorous examination. It is from these points of view that we must judge the success or failure of the Plan.

During the past year there has been a marked extension in the range of materials covered, and a corresponding increase in the number of firms receiving licenses to operate under the Plan. In spite of this growth and the experimental nature of a great deal of the work it is a pleasure to report that: (a) There is a general willingness on the part of the manufacturers to cooperate with the laboratory in improving and maintaining standards. (b) Complaints concerning garments or fabrics sold and carrying the label of the Plan are referred to the Foundation, and during the year these were six in number. In no case had merchandise tested and approved failed seriously in service.

For several years we have watched the steady growth and stabilizing effect of this Plan. This experience leads me to venture the thought that it expresses something in principle and method which might very well be extended not only in the textile industry but over a wider field.

During the coming year we hope to secure some relief from the necessarily heavy load of testing associated with the early stages of the enlarged Plan. This time will be used to advantage in pursuing more vigorously lines of investigation growing out of the experience gained. Earlier in this report I referred to wear-testing. The old problems of how to measure shrinkage, what are its causes and how to prevent them still remain. Some progress has been made during the year in research growing out of this branch of our work. An improved model of a fray-testing machine has been designed and constructed. The physical properties and fraying characteristics of eleven different fabrics have been measured. In all twenty fabrics are being used in the study. It is by investigations of this nature, combined with the study of garments submitted to actual wear, that the basis of workable and high standards of fabric construction is obtained.

I close this brief survey by referring to long-term research projects. With the aid of a grant from Dominion Silk Mills Ltd., an investigation of the operation known in the industry as "silk soaking" was commenced in 1938 and continued through the early months of 1939. It was recognized from the commencement that the scientific principles governing mill practice were not available in the literature or understood by those proficient in this ancient art. Whilst there is a broad basis of agreement among the latter there remain differences of opinion, and these express themselves in variations in mill technique. In the time available it was not possible to attempt a basic study of the silk film in relation to this process, and we have limited the research to a study of the effects of the process over a range of known variations on some of the more easily determined properties of the silk fibre. To illustrate, an attempt was made to measure the influence of temperature and composition of the soaking bath on strength, elasticity, flexibility, rigidity, surface friction and ease of wetting. Raw silk varies in its initial properties, and the inconclusive character of much of our research data can be explained by this fact. The Company and our staff are in agreement as to the wisdom of postponing work along these lines until we know more about the fundamental physical and chemical properties of the silk fibre. It is an interesting and very practical example of the interdependence of physics and chemistry and of the "pure scientist" and the mill operator.

Imperial Oil Limited has, during the year, made a grant in aid of our investigation of the principles controlling "scouring" in woollen mills. By this operation oil added to textile material to facilitate the mechanical stages of manufacture is removed to permit efficient dyeing and finishing. It is another example of an "art" gradually developing over a long period, efficiently performed but not sufficiently understood to permit much flexibility or profit from knowledge and materials made available by recent progress in other industries. The programme of work consisted in studying the scouring characteristics of a selected group of vegetable, animal and compounded mineral oils. Suitable equipment to duplicate standard scouring methods was designed and constructed in our machine shop. All the known factors were under control and could be varied at will. Much useful information has been obtained which will be made available by officers of Imperial Oil Limited to the textile mills. In addition a new field of research of great potential importance has been opened up, and which it is our intention to develop as soon as possible.

We are grateful to the Dominion Silk Mills, Ltd., and to Imperial Oil Limited for making these investigations possible.

For several years we have been attempting to elucidate the mechanism of shrinkage of woollen materials and to devise practical methods to reduce or prevent it. It is a rather long story of encouraging results, followed by disappointments, and then new ideas giving the research a fresh start. During the past year the staff has returned to the standard method of chlorination as the basis of their work. Its practical value has been established, and its limitations are also well known. Through the courtesy of York Knitting Mills Ltd. we have been able to correlate our work with the problems of factory production, and also to obtain critical reports on batch samples of material treated in the laboratory. The importance of the problem justifies continued effort, and in spite of interruptions the results of the past year encourage us to continue.

Research on the structure and properties of the silk fibre was commenced in the summer of 1938, and has continued without interruption during the past year. It has been a fruitful and well-conducted investigation which promises to contribute not only basic theoretical knowledge, but it will eventually provide the necessary foundation for the type of technical research in silk to which I referred earlier. To take one example, the elastic properties of silk and other natural and synthetic fibres are facts of increasing practical importance. The development of reliable laboratory technique for the measurement of such properties would be in itself an ample return for the time and expense involved in this research.

Moisture and textile fibres combine to create scientific and practical problems. During the year accurate information has been obtained on the effect of moisture regain on such qualities of the silk fibre as density, elasticity and extensibility. These measurements have necessitated the development of apparatus and technique calling for a high degree of mechanical dexterity and accuracy. It is, for example, characteristic of my colleague to construct a special micro-balance with which to weigh individual fibres which have a weight of about one hundred thousandth of a gram. The determinations are accurate within 1 per cent.

We are deeply grateful to Professor Burton of the University for his continued interest in this research, and to the Graduate School of the University for giving recognition to this and other investigations proceeding within the Foundation.

ENGINEERING AND METALLURGY

Staff: Mr. Ellis, Mr. Tasker, Mr. Jackson, Mr. Bassett, Mr. Cavanagh

My introductory statement in regard to the difficulty of reporting fully on some of the work of the Foundation applies particularly to this Department. It is possible to state that duties of importance have been assigned to the staff by the Canadian and British Defence Departments, and that the laboratories have been organized to perform these with efficiency and speed.

During the late summer Mr. Ellis was invited to spend several weeks in Great Britain as one of the scientific observers attached to a representative delegation of Canadian manufacturers. Both during the time overseas and later in the preparation of confidential reports he rendered distinguished service.

On the purely industrial side of the work we have experienced our first complete year equipped with adequate facilities for the heat-treatment of steel. A steadily increasing volume of commercial products, some of them relatively costly, has been coming to us. The production of alloy steels is developing year by year, and their use is frequently associated with precise and involved heat-treatment. The work coming to the Foundation provides the opportunity for the staff to keep abreast with technical and scientific advance. It has also brought them into contact with the personnel of over 40 firms engaged in this field.

During the year 51 problems involving laboratory work have been referred to this Department. Of these the following are representative examples.

A firm interested in the sale of diamonds for use in the north requested the Foundation to design and produce a drill-bit with a metal tip in which diamond dust was to be incorporated rather than relatively large and correspondingly expensive diamonds. Our results have shown great promise from a commercial standpoint, and in addition the work has brought new experience in what is known as "powder metallurgy," *i.e.*, the production of metal products of a known composition and size by the application of pressure to metal powder in a heated mould.

Work on problems associated with the production of car wheels continued throughout the year. This work is supported by Dominion Wheel and Foundries Limited.

A group of companies producing radiators and convectors requested a careful study of a series of convectors designed for hot-water installations. A full sized room with appropriate equipment was erected and the tests performed according to the Code of the American Society of Heating and Ventilating Engineers. One experimental convector behaved in an anomalous way when submitted to test under these standard conditions, and the results obtained pointed to the existence of some factor which is not under control during these tests. The report has aroused interest in the Society and will, no doubt, lead to further research in this important field.

The Boiler Inspection and Insurance Company continues to refer to the Department parts of equipment which have failed in service.

In connection with our study of alloys which are resistant to abrasion a new experimental mill has been built to enable the operator to control the composition of the atmosphere above the balls and abrasive.

An investigation of the effects of temperature and composition of the atmosphere on a number of steels has been completed.

Work is in progress on the solubility of carbon in alloys of iron and tungsten, also on the characteristics of alloys of iron, carbon, manganese and silicon.

Routine testing of the fatigue limits of important steel samples, accompanied by difficulties and uncertain results, has created the necessity for a complete overhaul and important changes in our fatigue-testing machines. When this work is completed we hope to take up again a study of the influence of decarburization on the fatigue strength of steel.

CHEMISTRY

Staff: Dr. Westman, Mr. Schierholtz, Dr. Marshall, Mr. Lee, Mr. MacHattie, Mr. Patrick, Mr. Ingamells, Mr. O'Sullivan

This Department is not only concerned with the more or less related problems, technical and scientific, of one or a group of similar industries. The industrial work of the Province is diversified in character and the condition determines the nature of the enquiries and problems submitted to this Department.

One of the most difficult problems confronting us is to perform these services efficiently and at the same time maintain the present organization of the laboratories, namely, a number of units each with an industrial background and affording the staff opportunities for specialization in technical experience and research.

Due to the marked increase in the number and diversity of problems submitted to us by manufacturers, and the responsibilities associated with the war, it has been necessary to keep the staff mobile. The consequence has been that many of the long-term investigations have been retarded. In spite of this situation good work has been done, and with the necessary reorganization completed and additional staff, I feel confident that rapid progress is ahead.

A year and a half ago work of a military and confidential character was referred to this Department and that of Metallurgy. It was the starting point in the gradual building up within the Department of a relatively large unit for analytical purposes. It is important to emphasize that analytical chemistry has and must continue to advance rapidly to deal with the increase in the complexity of the materials to be analyzed. It is no longer possible after a short academic training to undertake the problems which confront the general analyst. I may illustrate by stating that during the past year 33 different elements have been measured, and in some cases as many as 12 elements were combined in the one material. We regard the past year as one of training and organization, although over 700 analyses were carried out. The justification for the time and expense involved in this undertaking is to be found in the selection of this laboratory to carry out responsible work for the Defence Departments.

In addition to general analytical work we are being asked to undertake referee work and studies of unknown compounds and products.

Members of the staff in the organic laboratory have cooperated with the Textile Department in carrying out research associated with the development of compounded mineral oils for use in the textile industries. Such marked progress was made that it was decided to withdraw our existing patent application and to base our application on the newer results. I regret that these circumstances prevent my describing in detail the work and its results.

With the financial support of the Wm. Wrigley Jr. Company an investigation has been in progress throughout the year into the problems associated with the manufacture of sugar-coated gum.

The use of 3-ply wood in industry is widespread and increasing year by year. Recently there has been renewed interest in this material for aeroplane wing construction. The adhesive used in this material is of primary importance, and our previous studies of various types of glue have enabled the staff to render effective service on several occasions during the year. In one case a formula for a glue based on Canadian casein replaced an imported product with considerable saving to the manufacturer.

In the ceramic laboratory a satisfactory, cheap and weather-resistant grey glaze has been developed and a greatly improved green glaze also. This work has been continued in the form of plant trials, during which the importance of accurate firing control was observed. Owing to the war the investigation has been temporarily discontinued, but samples of the products are available for outdoor weathering tests.

The study of methods for the production of a light grey brick from clays found in the Toronto district continues. So far we have not felt able to recommend any clay or process for plant work, but bricks have been made which have showed practically no deterioration in outdoor weathering tests. The experience gained in the production of glazes will be of value in exploring further the possibilities of coated bricks. The staff has also assisted in developing improved briquettes of water-softening chemicals. This research into the best chemicals for the purpose has been rendered more important by the disturbing influence of the war on supplies of some of the ingredients formerly used.

Among many encouraging features of the work carried out in the laboratory supported by the Consumers' Gas Company of Toronto, perhaps the most important has been the increased integration of the researches with the work of the operating departments. We are grateful for the assistance and encouragement we have received from those with long experience in the industry. A careful study of the factors involved in pilot stoppages in the system has resulted in a report which clearly explains circumstances which formerly seemed contradictory and confusing. This work, undertaken in cooperation with the plants and the distributing engineers, has resulted not only in a marked reduction in stoppages, and the consequent savings, but has increased the uniformity of the gas delivered to the consumer in its physical and chemical properties. In connection with gas research it is necessary to develop aptitude in the construction of analytical apparatus which is both intricate and accurate. To illustrate the success of the laboratory in this essential field I might refer to the construction of an apparatus for the above research which saved 6 to 8 weeks' time. It has been a year of enlarged experience, and the future is full of promise for the laboratory.

In the Paint and Varnish laboratory the following research projects are in hand: comparison of weatherometer and exposure tests, primers for galvanized iron, effect of wetting agents on chalking, the heat treatment of drying oils, solvent extraction of oils, and the effect of driers. This is an extensive programme, and under the best of circumstances would require several years of work and observation. One advantage of this method is that it has enabled the staff with unusual rapidity to take up and contribute to the solution of the increasing number of problems referred to them from these industries. During the past year there has been an increase of 50 per cent. in this branch of our work. It is fortunate that we have passed through these years of preparation in view of the important work which is now being entrusted to the laboratory by those in authority.

In the laboratory devoted to problems in the paper using industries some progress has been made, especially in the designing and constructing of essential apparatus used in this field. This has been particularly the case in connection with coated paper, and we are now in a far stronger position to undertake research leading to the development of coating compounds. This work will be facilitated by the use of such apparatus as a machine for testing accurately the strength of heat-sealed joints in coated paper packages.

BIOCHEMISTRY

Staff: MR. HENRY, MR. LEMON, DR. HOLCOMB, MR. EVANS

In my last report I referred to the progress made in the leather laboratory in developing a combination-tanning process for producing sole and belting leather. The great merit of such a process compared with standard vegetable tanning methods is that the time involved is much shorter, and there is evidence to show that some of the less desirable features of chrome leather can be avoided. In spite of the progress we recognized the limitations of the method developed arising from the darker colour of the finished leather. From a commercial standpoint colour is of vital importance, and is possibly emphasized too much at the expense of the wearing properties of the leather. Until the public ceases to regard a straw-coloured sole as indicative of good leather this situation will continue.

During the past year our laboratory process has been modified fundamentally, and it is now producing on a small scale sole leather which is satisfactory in colour, strength and wearing qualities. The desirable feature of comparative speed in the process has been retained. At the present time we are cooperating with the McQuay Tanning Company, of Owen Sound, in conducting a plant trial designed to show how our process compares with the standard process of belting leather. We hope to make similar arrangements for plant trials in connection with sole leather. The potential value of these methods will increase greatly if in the near future a marked increase in the demand for finished leather arises.

"Spew" is a white discolouration which appears frequently on finished leather. With the very limited knowledge available as to the cause it is almost impossible to predict its development or explain it afterwards. During the past ten years we have had numerous examples of spew to investigate, and the results were always limited by these conditions. The laboratory has attempted during the year to make some contribution to a better understanding of this important problem. Standard samples of finished leather from the same hide were treated in various ways and kept under close observation under controlled humidity and temperature conditions. Already useful observations have been made, *e.g.*, none of the samples which had not been treated with a heated plate in the finishing process developed spew. No leather treated with an oil which contained less than 10 per cent. of solid fatty acids has developed spew to date. Higher percentages of solid acids caused spew in many cases, but not in all. This research is continuing.

In 1938, this Department working in collaboration with Marshalls' Company Ltd., developed an egg yolk preparation for use in the leather industry. It has been used successfully and on a comparatively large scale. Recently it has been necessary, on account of market rather than technical difficulties, to continue the investigation, and at the present time plant trials of a new product are being conducted.

The search continues for a machine with which to test leather and secure data which will predict accurately the wearing properties of the leather. Our own machine, designed by the Bureau of Standards, Washington, is based on the assumption that resistance to abrasion is a measure of wearability. Apart from other debatable features of this assumption it is obviously necessary to select and standardize the best abrasive agent. During the year tests have been conducted to show whether the coarseness of the abrasive influenced the rate of wear of sole leather, and whether the relative amounts of wear with different abrasives remained constant over a series of sole leathers. Durex carborundum cloths ranging from 120 to 36 mesh were used. It was found that 36 mesh cloth increased the rate of abrasion of all leather samples by about 10 per cent. The relative wear of the samples remained the same. Our conclusion is that any of the abrasive cloths used will give satisfactory comparative figures of the resistance of leather to abrasion. On the basis of the reports in the literature and our own experience the laboratory is more confident of the guidance which this type of test gives as to the true wearability of leather.

The investigation of a compound for use in the cake baking industry, started in 1938, was brought to a successful conclusion during the past year. It is now being manufactured on a commercial scale in Toronto. Attempts were made to enlarge the potential market by the development of a similar product for use in salad dressings.

In the microbiological laboratory attention has been focussed on improvements in the commercial production of lactic acid, and on the preliminary laboratory work associated with the production of citric acid. By means of a careful laboratory study of the influence of various factors on the rate of fermentation a very considerable reduction in the time required for each in the plant has been brought about. Later in the year several methods for the preparation of refined edible lactic acid from the crude were investigated. In view of the fact that lactic acid is now being manufactured and sold in Canada this work affords a convincing example of what can be done with a by-product by combining laboratory research and a careful study of the economics of various technical possibilities. As stated in my last report this work has received the financial support and valued cooperation of the Beamish Sugar Refineries Limited. In the citric acid work we have been mainly concerned with the selection of cultures, proving optimum conditions of growth and acid production by the organism, *Aspergillus niger*, and the selection of speedy and accurate methods for the determination of citric and associated organic acids.

It is only necessary to consult the advertisements in current journals to realize the growing importance of vitamins in the diet of our people, and also to recognize the changing attitude to the problems involved. Partly as a result of educational work by the medical profession and other agencies and partly as a result of more stringent regulations, it is no longer sufficient to make broad general claims as to the vitamin content of food or pharmaceutical preparations. Industry generally is meeting the demand for "assayed" products, and we have endeavoured to keep pace with this changing situation. Not many years ago the majority of the known vitamins were measured biologically, *i.e.*, by measuring or observing the influence of materials, thought to contain the vitamin, on a group of carefully controlled small animals. More recently rapid strides have been made in the development of chemical methods for the production of several of the vitamins, *e.g.*, vitamin B_1, and similar methods for the assaying of them. In our desire to provide facilities, especially for the smaller manufacturer, for this important field of work we are systematically repeating and appraising the accuracy and reliability of these chemical methods as they appear in the literature. The need for such an approach, rather than a confident acceptance of this or that method, has been amply confirmed by our experimental results in studying methods for the estimation of vitamins A and G.

The justification for an attempt to provide facilities which are quick, accurate and not too expensive can be indicated by the following examples. In recent years a market has developed in Great Britain for dried, young, green alfalfa. Several plants have been established in Ontario for processing the crop, and the product is sold on the basis of caratene (vitamin A), crude fibre and protein content. This Foundation is cooperating with the Poultry Department of the Ontario Agricultural College in a study of methods for estimating the riboflavin (vitamin G) content of eggs and feedstuffs used in poultry nutrition.

During the year we ran into a period of uncertain results in our biological assays of vitamin D. For a time it seemed impossible to produce normal controls showing rickets, and eventually the difficulty was traced, tentatively, to the presence of relatively large amounts of D in the diet of the mother rats. The problem has been successfully overcome, but it leaves unsettled in any conclusive way the question as to whether or not D can be stored in the young during pregnancy. The equipment necessary for the biological assay of D by the chick method has been installed and used satisfactorily. This method is called for in the assaying of D in poultry feeds.

In the general food laboratory rapid progress has been made in the development of a process for producing a coffee extract concentrate.

The Department has handled satisfactorily the normal quota of short-term investigations submitted to us by commercial companies.

I feel that this story of varied and successful effort by a comparatively small group of workers is the natural result of their ability combined with loyalty to the Foundation and to each other. During the past year in particular, the duties of administration and organization of new work have been made lighter by a general attitude on the part of my colleagues to assist in making whatever contribution we can to the task which the country faces. They in turn would desire me to express to you their appreciation of the large measure of trust which you have placed upon them.

All of which is respectfully submitted.

Faithfully yours,

H. B. SPEAKMAN,

Director.

Appendix A

ADVISORY COUNCIL

Chairman: E. Holt Gurney, Esq.

Vice-Chairman: Edwin G. Baker, Esq.

Advisory Council:

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Thomas Bradshaw, Esq	President, North American Life Assurance Co., Toronto.
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A. L. Clark, Esq., B.Sc., Ph.D	Dean, Faculty of Applied Science, Queen's University, Kingston, Ont.
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G. C. McEwen, Esq	Vice-President and General Manager, Imperial Varnish & Color Co., Ltd., 2 Morse Street, Toronto.

George McLaughlin, Esq	Box 235, Oshawa, Ontario.
J. Stanley McLean, Esq	President, Canada Packers, Limited, Toronto.
Humfrey Michell, Esq., M.A	Professor of Political Economy, McMaster University, Hamilton, Ontario.
W. Lash Miller, Esq., C.B.E., Ph.D	Professor Emeritus of Physical Chemistry, University of Toronto.
Paul J. Myler, Esq	President, Canadian Westinghouse Co. Ltd., Hamilton, Ont.
T. A. Russell, Esq., LL.D	President, Massey-Harris Co. Ltd., Toronto

Appendix B

ONTARIO RESEARCH FOUNDATION STAFF

1939

Director—H. B. Speakman, D.Sc. (Manc.)
Secretary—Ralph Skelton, B.Sc. (McGill)
Librarian—Miss Maynard Grange
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ENGINEERING AND METALLURGY

Director—O. W. Ellis, M.Sc. (Birm.)
Secretary—Miss Margaret D. Ray, B.A. (Tor.)
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Research Fellow—I. J. W. MacHattie, M.A. (Tor.)
Research Fellow—K. Patrick, M.A.Sc. (Tor.) A.I.C.
Research Fellow—C. O. Ingamells, B.A. (Wes.)
Research Fellow—M. O. O'Sullivan, B.A. (Tor.)

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Director—A. C. Goodings, M.Sc., Ph.D. (Leeds) F.T.I.
Secretary—Miss Ruth Mackenzie
Research Fellow—R. W. McKay, M.A., Ph.D. (Tor.)
Research Fellow—M. L. Staples, M.A. (Tor.)
Research Fellow—L. H. Turl, M.A. (Tor.)

PATHOLOGY AND BACTERIOLOGY

Director—Seymour Hadwen, D.V.Sci. (McGill), F.R.S.C.
Research Fellow—A. M. Fallis, M.A., Ph.D. (Tor.)
Animal Keeper—J. E. Pritchard

BIOCHEMISTRY

Director—H. B. Speakman, D.Sc. (Manc.)
Secretary—Miss Mary Jeffrey
Research Fellow—W. C. Henry, B.A. (Tor.)
Research Fellow—H. W. Lemon, M.A. (Tor.)
Research Fellow—R. K. Holcomb, Ph.D. (McGill)
Research Fellow—E. V. Evans, M.A. (Wes.)

AGRICULTURE

Director—H. B. Speakman, D.Sc. (Manc.)
Research Fellow—T. D. Jarvis, B.S.A. (Tor.)
Research Fellow—B. P. Skey, A. E. (Prague), M.S.A., Ph.D. (Tor.)
Research Fellow—L. J. Chapman, B.S.A. (Tor.), M.S. (Mich. State)

Appendix C

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*A limited number of those reprints marked with an asterisk are still available and may be obtained on application to the Librarian.

Appendix D

EXHIBIT "A"

ONTARIO RESEARCH FOUNDATION
BALANCE SHEET

AS AT DECEMBER 31, 1939

ASSETS

Cash in Bank and on Hand:			
In The Canadian Bank of Commerce:			
Trust Bank Account	$ 93,565.53		
Operating Bank Account	8,939.47		
		$ 102,505.00	
Petty Cash		43.59	
			$ 102,548.59
Investments:			
Bonds (at cost):			
Canadian Trustee Bonds	$2,483,934.84		
Canadian Public Utility Bonds	258,261.27		
Miscellaneous Bonds	292,423.93		
Total Bonds	$3,034,620.04		
Accrued Interest thereon to December 31, 1939	37,708.58		
		$3,072,328.62	
Stocks, valued at market at December 31, 1939		505,037.00	
			$3,577,365.62
Automobile		$ 516.00	
Less Reserve		175.00	
			341.00
Accounts Receivable		$ 7,374.39	
Less Reserve		2,738.72	
			4,635.67
Stores and Containers			8,402.45
Advances			348.33
Prepaid Insurance			1,501.90
Fixed Assets (being those owned by Ontario Research Foundation):			
Structural Additions and Alterations		$ 23,610.84	
Apparatus and Instruments		46,146.45	
Office Furniture and Fixtures		3,340.09	
Library		25,755.70	
			98,853.08
			$3,793,996.64

LIABILITIES, RESERVES AND SURPLUS

Accounts Payable			$ 1,129.67
Reserves:			
Reserve for Income Stabilization		$ 317,550.00	
Reserves for Replacement of Equipment owned and used by Ontario Research Foundation:			
Structural Additions and Alterations	$ 26,181.46		
Apparatus and Instruments	65,849.06		
Office Furniture and Fixtures	6,136.93		
Library	13,868.94		
		112,036.39	
Total Reserves			429,586.39
Surplus:			
Subscriptions Paid			3,363,100.00
Income Surplus			180.58
			$3,793,996.64

Signed on behalf of Ontario Research Foundation:

RALPH SKELTON,
Secretary-Treasurer.

I have audited the books and accounts of Ontario Research Foundation for the year ended December 31, 1939, and I have received all the information and explanations I have required and I certify that, in my opinion, and subject to my report, the above Balance Sheet is a true and correct view of the affairs of Ontario Research Foundation as at December 31, 1939, according to the information and explanations given me and as shown by the books.

All my requirements as auditor have been complied with.

Toronto, Canada, January 23, 1940.

ELLIOTT ALLEN, F.C.A.
Of Allen, Miles & Fox,
Chartered Accountants.

Exhibit "B"

ONTARIO RESEARCH FOUNDATION

INCOME AND EXPENDITURE ACCOUNT

Year Ended December 31, 1939

Income:

Balance at January 1, 1939			$ 2,183.66	
Bond Interest:				
Received for year	$105,424.19			
Received (arrears)	333.25			
Accrued	37,708.58			
		$143,466.02		
Dividends on Stocks		35,310.70		
Bank Interest		359.28		
Researches for Industrial Corporations		48,616.66		
Royalties Received		397.30		
Discount taken		90.12		
United States Premiums		2,338.12		
			$230,578.20	
Gain on Securities Sold			479.79	
				$233,241.65

Expenditure:

Salaries:		
Laboratory Salaries	$103,571.16	
Other Salaries	29,851.75	
		$133,422.91
Laboratory Expense:		
Chemicals	1,655.61	
Apparatus	6,046.10	
Other Supplies	6,039.89	
Travelling	4,116.23	
Sundry	1,095.60	
		18,953.43
General Expense:		
Bank Charges	220.88	
Extension Work	2,870.58	
Fuel	1,377.45	
Gas and Water	1,355.24	
General Expense	6,860.72	
Insurance	1,407.03	
Light and Power	4,106.82	
Office Expense	1,280.72	

Postage and Excise	$ 404.57			
Patent Expense	168.73			
Repairs and Alterations to Buildings	4,375.10			
Staff Annuity Account	2,216.35			
Telephone and Telegraph	1,284.75			
Travelling	1,395.46			
		$ 29,324.40		
			$181,700.74	
Depreciation:				
On Structural Alterations and Additions		$ 3,308.31		
On Apparatus and Instruments		9,509.57		
On Furniture and Fixtures		699.78		
On Library		2,244.14		
			15,761.80	
Transferred to Reserve for Income Stabilization			$ 27,049.91	
Transferred to Reserve for loss in market value of stocks			6,548.62	
Transferred to Reserve for Doubtful Accounts			2,000.00	
				$233,061.07
INCOME SURPLUS AT DECEMBER 31, 1939				$ 180.58

Annual Report

UPON THE

Ontario Training Schools

FOR THE YEAR ENDING 31st MARCH
1940

PRINTED BY ORDER OF

THE LEGISLATIVE ASSEMBLY OF ONTARIO
SESSIONAL PAPER No. 51, 1940

ONTARIO

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1940

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TO THE HONOURABLE ALBERT MATTHEWS,
Lieutenant-Governor of the Province of Ontario.

MAY IT PLEASE YOUR HONOUR:

The undersigned has the honour to present the Annual Report upon the Ontario Training Schools for the year ending 31st March, 1940.

Respectfully submitted,

H. C. NIXON,
Minister.

HONOURABLE HARRY CORWIN NIXON,
Provincial Secretary of Ontario.

SIR:—

Attached is the report of the Training Schools Advisory Board, the reports of the Superintendents and tables of statistics covering the operations of the Industrial Schools and Training Schools of Ontario for the year concluded on March 31, 1940.

On June 26, 1939, in accordance with the Training Schools Act, 1939, the Industrial Schools became Training Schools in name as well as in fact.

A study of these reports and statistics reveals to an appreciable extent the problems and difficulties in rehabilitating these children. A Training School of this nature is obviously one so organized that the children who are sent to it will be so trained that they will not only henceforth be proper in personal conduct and in obedience, to the Statutes, but will be able to earn an honest livelihood and enjoy the benefits and cheerfully accept the responsibilities of good citizenship. Therefore, the staff of that School, its buildings and equipment and all its activities must be developed and directed to the one all-important purpose—making good citizens of its pupils. It is easy to say that this must be done, but it is often very difficult to achieve it. This is immediately apparent when it is noted that the Intelligence Quotient of the pupils sent to the Training Schools this year ranged as low as 45 and that in a total of 444, two hundred and eighty-three were in the mental groups below 90. Therefore only 161 were in the normal and superior intelligence groups and this is only one of the many complexities of this young human material.

In one of the attached tables of statistics the factors contributing to the delinquency of these children are stated. Undesirable and unfortunate home conditions are directly responsible for the delinquency in 403 cases from the total of 444. In this same total of 444, forty-four were committed for breaking and entering, 157 for theft and 161 for incorrigibility. Habits are formed early in life and a further handicap is obvious when it is noted that of the 444 total, 433 were in the age group from ten to fifteen inclusive with 158 or 35.5% in the fifteen year group.

Before sending them to the Training Schools efforts have been made to get them properly readjusted. Such efforts were by parents, friends, Courts, Children's Aid Societies or other Organizations or a combination of two or more of these. Actually of the 444 total, 268 had at least one previous Court appearance before being sent to the Training School. These children are temporary failures and many of them can be salvaged. It is clear that previous poor training, bad habits and wrong thinking predominate in such children and must, if possible, be rectified. That means persistent intensive and often lengthy application of good training. Such training, obviously must be adapted to overcome the particular delinquencies and to use to the utmost the particular abilities for good in each child.

The length of stay at the School varies from a few months to three years. One of the statistical tables attached shows the average stay at each school. The average stay at the Schools at Galt and Bowmanville has been reduced to one year, partly because admissions and commitments exceeded accommodation.

Foster home placements have been used by all the Schools but to a somewhat larger degree by the Galt and Bowmanville Schools. These foster homes are carefully selected private homes. They have been the means of rehabilitating many children and therefore are a valuable part of the whole programme.

Generally when a pupil over 16 years of age has made satisfactory progress outside the School for one year and appears to be safely re-established, wardship of the School is terminated. Considering the kind of human material with which the Schools must work, their measure of success is good. It is always difficult to appraise accurately the degree of success in such work because it must be measured through the whole lifetime of the individuals. Certainly it appears that the substantial majority are permanently readjusted as useful citizens. There are, of course, failures and these failures to a large extent are found later in the Reformatories and Prisons. Such failures are probably to be expected but nevertheless they are always disappointing.

Children's Aid Societies, other Social Service Organizations and individuals have given and are giving valuable assistance in providing histories of each pupil and wise supervision after these pupils leave the Schools. Even more important is their work which is obviating the necessity of sending children to these Training Schools. Therefore, I wish to commend highly and to thank them and all others who have assisted in this work during the year under review.

C. F. Neelands,
Deputy Provincial Secretary.

REPORT OF TRAINING SCHOOLS ADVISORY BOARD

To The Honourable H. C. Nixon,
Provincial Secretary.

Sir:—

We have the honour to present the ninth annual report of the Training Schools Advisory Board, for the year ending March 31st, 1940.

During the year we have held 52 meetings at which 3,998 cases were presented. The record of each boy and girl in the Schools, or on parole under the supervision of the Schools, is reviewed every four months and more frequently when special attention is required.

The Training Schools of the Province are not penal institutions and should be looked upon as educational in their function; and therefore your Board welcomes the new legislation effective June 26th, 1939, whereby the former Industrial Schools were legally made Training Schools, so that all are operating under the new Training Schools Act, 1939.

Upon entering a Training School each pupil is given a thorough physical examination, including tests for diphtheria, scarlet fever, and vaccination against smallpox. A tuberculin test is also given, and if this is positive it is followed by periodical x-ray examinations of the chest. Mental examinations are given in each case, and these prove of great value in determining specific requirements in the training and education of the individual pupil.

The academic and vocational work carried on in the schools is subject to regular inspections of the Department of Education. The reports presented by the inspectors show that the work in our Schools is conducted strictly according to the regulations of the Department of Education, and proves to be fully up to the standards prevailing in the Public and Separate Schools of the Province.

The Board made a special survey during the year in regard to boys over sixteen and a half and girls over eighteen years of age, residing in the Schools, with the object of placement in the community as soon as the child's adjustment would warrant such action.

The Board repeats its opinion of former years, that there is need for an institution for delinquent defectives who become serious problems in the Training Schools. Some of these difficult pupils cannot be admitted for training at the Ontario Hospital School, Orillia, for two reasons:—first because the Institution is already well filled, and secondly because the cases referred to require a different sort of handling than either in the Training Schools, or the Ontario Hospital School, Orillia. During the year 14% of the new pupils received in the Training Schools were mental defectives; and at the close of the year a total of 18% of all pupils in residence were mental defectives.

Your Board follows the policy of paroling pupils from the Schools as soon as possible, such placements being of three kinds:—

1. Return to the child's own home. This course is desirable and is adopted whenever the home conditions are satisfactory.

2. If it is inadvisable to return a child of school age to his own home, a suitable foster home is located where the child is boarded in order to continue schooling. Thus the period of institutional residence is reduced.

3. Older boys and girls who may not return home have positions secured for them, thus enabling them to become self-supporting. Each School has one or more full-time Placement Officers who secure boarding and other homes, and supervise the pupils on parole. Reports from these Officers must be approved by the School Superintendent and submitted to the Board to ascertain that such placements continue to be satisfactory.

Six percent. of those at present in the Schools are children under the age of twelve, and our efforts to return them to some form of normal family life as soon as feasible will be continued.

In previous reports the Board has recommended that serious consideration be given to the possibilities of extending the Juvenile Court System, and we again wish to draw attention to this matter. In the Cities where Juvenile Courts are established, the co-operation of voluntary social agencies is of great help. There have been cases of boys and girls who were finally committed at fourteen and fifteen years of age, whose delinquency record would have justified them being sent to the Training Schools earlier than their eventual commitment.

The rehabilitation of Indian boys and girls continues to be a problem. As it is considered that Indian juvenile delinquents should receive training in Indian Schools, your Board again recommends that suitable arrangements be made between the Provincial and Dominion Governments to permit all Indian delinquents to be transferred from the Provincial to the Dominion authority.

On September 22nd, 1939, the Board held their regular weekly meeting at the Ontario Training School, Galt. This was followed by a luncheon which had been prepared and served by some of the pupils. The Superintendent then conducted the Board members on a tour of the buildings.

The Board records with regret the resignation of its chairman, Mr. C. L. Burton, who since its inception has taken a sincere interest in the work of the Board and given freely of his time and personal attention. Mr. Burton's other numerous activities, and in particular the extra calls upon his time in connection with war work, have made it impossible for him to continue on this Board.

ADELAIDE M. PLUMPTRE,
W. T. KERNAHAN,
GEORGE W. HAMBLY,
E. P. LEWIS, M.B.

REPORT OF THE ONTARIO TRAINING SCHOOL FOR GIRLS, GALT, ONTARIO

April 1, 1939 to March 31, 1940.

"I don't know of another school where you could go and learn to do so many different things in a week as we learn here!" was a chance remark of one girl to another overheard by a staff member. This remark suggests the theme for the analysis of our year's work.

Mary.

Mary arrived at the school one Monday morning in early April accompanied by a Children's Aid Worker. She had been committed on the grounds of incorrigibility. The Worker introduced her to the Superintendent, and after a few friendly remarks, she met Helen, who had come to the Office from Receiving Cottage to accompany her back there, and to introduce her to the House Mother and girls.

The House Mother invited Mary to her Sitting-room to have a chat and to tell her of some of the opportunities the school provided through its various activities, all the while keeping in mind the report on Mary, which she had received from the Office. This report indicated Mary had been a school problem, for although she was of good normal intelligence, she was only in Grade VII, and was fifteen years of age. She said she was repeating her grade, and that she had always hated school.

Presently, Mary was shown to her room, and the House Mother explained the simple rules of the Cottage and School to her. As Mary arrived without luggage, her clothing needs were discussed and a few immediate necessities were supplied to her, until her own clothing had been sent for and her further needs provided. Mary was assured that from time to time in the matter of a wardrobe, her tastes would be given consideration, and in return she would be expected to show thrift in the use and care of what was given her.

As the girls would soon be returning for lunch, from their various academic and vocational groups, Mary was shown to the Common Room, and encouraged to drop her family a note, and to become familiar with her surroundings.

On the return of the girls to the Cottage, Helen, who was in the kitchen, reappeared to introduce Mary to them, and as the bell rang for lunch, Mary was shown her place in the dining-room. Mary looked about her and inquired: "Why do the girls at some tables serve themselves, while at one table the food is brought in on individual plates from the kitchen?" Helen laughingly explained that the girls at this table were counting their calories, and were at least ten pounds overweight.

Mary thought the food was good, and was amazed to learn that it had been prepared by the girls themselves under the direction of a dietitian and inquired who did the dishes. Elizabeth chirped up, she'd soon find out. Helen explained, however, there were six girls in the Cottage taking the Domestic Training course, and it could be completed in five months, (if you were smart and behaved yourself). Helen said she hoped to be finished next week. She had spent a month as dining-room girl, learning how to set tables, the care of silver, how to serve, and the planning and serving of staff food. Another month was spent in the pantry, where she had been responsible for the storage, care, ordering and distribution of all foods for the cottage; and during the past three months she had been in the kitchen, learning its organization, its care, and how to do plain and fancy cooking. Here, she assured Mary, she had discovered it wasn't always the amount of food that made a balanced meal, but what foods were combined. About dishes Helen explained, these were done by the kitchen girls, and two helpers appointed from the school girls.

Their conversation was interrupted at this point by the House Mother, who dismissed the girls for Rest Hour, reminding them that the first bell rung would be for school girls at 1.25, the second for the Laundry, Power operation and Domestic Training groups at 2, and 'as it was raining outside, the girls should not forget their rubbers.'

Following the Rest Period, Mary was called to the Doctor's office by the House Mother, (who was also the Nurse), to meet the Doctor and have a complete medical history taken and examination done. It was noted that Mary would require a tonsillectomy at an early date; also that her teeth were in need of immediate attention. An appointment was made in the dentist's book for his next visit. Mary was considerably overweight, and the Doctor asked that her weight be watched and if it was not affected by diet, a metabolism test should be done.

It was now three o'clock and reference to the time-table disclosed Grade VII were at Physical Training, which activity seemed an opportune one for Mary's introduction into school life. As Mary's teacher resided in Reception Cottage, the House Mother telephoned she was sending Mary to school, and a classmate was sent to meet her.

Mary arrived as the girls were lining up for volley-ball. She entered wholeheartedly into the game and thus her advent into school life was a pleasant one.

When Mary heard her next class was Religious Education, she felt a bit annoyed; however, the other girls assured her that she would be very interested in it, because the teacher made the women characters of the Bible, about whom they were studying, so real.

Dismissal of the group at five o'clock was followed by Shower Time, and the assembling of the girls in the Common Room to await the announcement of supper

As Mary entered the Common Room, Gladys whispered that the girls were very proud of this room as they had just finished painting it the past week. They hoped to have new yellow chintz curtains made by the Power Operators to harmonize with the walls and furniture.

That evening supper was served fifteen minutes earlier than usual, because the girls were invited to the Y. M. Circus in Galt, and cars were calling for them at 7.20.

It was a tired Mary who crawled into her comfortable bed that night, and as she drifted into sleep, she remembered she had expected to be homesick, but there really hadn't been time!

It seemed as if rising-bell sounded before she had had half enough sleep and Mary could hear the girls scurrying in and out of their rooms, dressing for breakfast at 7.30. After breakfast, Mary noticed everyone shared in the cottage work, and each girl cleaned her own room. She was glad when the House Mother showed her how to make a bed properly as they do in a hospital, (for hadn't she always wanted to be a nurse?) At 8.40 the bell rang and the girls assembled in the downstairs hall to go with the staff to the Assembly Hall where chapel was held each morning.

Following the service, the senior girls presented a skit on posture, and distributed cotton ties to all members of staff and to the students, promising each that if she did not remember to stand straight and sit erectly, she would be tieless at the end of the week, for the scissors were going to be busy every day clipping.

When school was dismissed at lunch, Mary learned that her class would be walking to Galt that afternoon for a swim at the Y tank, and remarked that it was going to be hard for her to walk two miles and back, as she had hitch-hiked most places she had gone the past two years.

Mary's companion on the walk was Estelle from Coronation West Cottage. Estelle talked freely about her life at the school, telling Mary she had been here a year and that she had been sent in the first place because of bad temper. She told how it had taken several months and many periods of isolation in her room before she became interested in controlling it; she had been so hard to get along with that she was transferred from school to the Laundry group, because here the girls worked by themselves and had to concentrate as there was so much detail in their work, and the Supervisor could watch every move the girls made. "It did me a lot of good," she said, "but I believe what helped me most was when I saw the Clinic doctor, and he suggested I keep a temper chart and that every day I had no temper spell I'd give myself a star. I was to show him the chart on his next visit. I really tried, and after the first month it wasn't nearly so hard."

Then, Estelle continued, she had thought she would not like a domestic position and she had asked to talk over her future vocational plans with Miss C. who was "the staff who read your mind" (psychologist). She had decided to take the Power Operating course, as most of the girls who had taken this had been able to get work. After three months she knew she had chosen the right vocation, and hoped at the end of another three her speed would be up to a point where she could get a job. Mary expressed interest in the Beauty Parlor course. Estelle thought she would like to spend a short time at this work too, as the girls who had, had learned how to take better care of their hair and personal appearance, but on the other hand they found it difficult to get work in a Beauty Parlor as they had to enter as apprentices, and only two of the girls had been able to find such openings.

Mary was surprised that she was not more tired at suppertime, but she felt satisfied to pass a quiet evening in the Common Room mending and writing letters.

Wednesday, Mary had to choose her hobby classes. The staff asked her to decide these on the basis of what she liked to do, rather than who she liked to be with, because the classes continued for several months and she would have an opportunity to learn a good deal about her choices.

The teacher reported on Thursday that Mary appeared bored at school, and in view of her intelligence rating and the fact that she was repeating her year, it was decided after conference to advance her to Grade VIII, where she would have new work and would be stimulated to greater effort.

When Friday night came, Mary breathed a sigh of relief that her first week at school was over, and she now knew what she would be doing for the next few months. She smiled when she thought of telling her home folks about her hobby choices of Sculpturing, Woodwork, and Dancing, and how interested they would be to hear she was in the class that had been chosen by the Domestic Training teacher to make the lunch for the orchestra that had put on a concert in the Auditorium that night. She inwardly hoped too, that she would have an opportunity to join the school orchestra.

In the days that followed, Mary began to feel a security in her new home. What the girls had told her of the surprises, that were always happening, she knew to be true, and as she looked out of her bedroom window across the hills, she thought how she would welcome the late spring and summer, when the flowers would be blooming and she would have an opportunity to work in the garden, (for she understood there was a class in field work), and if she was good, she might be chosen to take care of the two hundred baby chicks. This certainly wasn't the time of year to make New Year's resolutions, but she intended to earn every privilege, for it was rumoured something worthwhile was planned for each week. Already arrangements were under way for cross-country hikes, early-morning swimming at the Preston dam, and day-long picnics. Yes, it was worth her while to be good, and besides it wasn't hard, life was so full and interesting.

We hope that those who read of "Mary's week at the School" may catch a glimpse of some of the esprit de corps we are trying to develop through healthful work and play, and may unite their efforts with those of us who seek to give every girl a chance.

ACADEMIC REPORT.

Year Ending March 31, 1940.

Number of girls in High School room:

Grade VIII	28
Grade IX	16
Grade X	8

Attendance in the elementary classes was so heavy during the spring term from Easter to mid-summer, that it was necessary to have the classes rotate. Grade VII attended in the mornings and the lower grades in the afternoon.

Number of girls in Elementary Room:

Grade VII	36
Grade VI	18
Grade V	5
Grade IV	4
Auxiliary	7

REPORT OF WORK DONE IN LAUNDRY DEPARTMENT.

April 1, 1939—March 31, 1940.

Number of girls in group throughout year	59
Average length of time spent in group	3 months
Number of articles girls' clothing	20,694
Number of articles staff clothing	2,776
Number of articles cottage linen	8,390 *
Total	31,860

* allows 10 per hundred for kitchen linen.

M. E. Pender,
Supervisor.

REPORT FROM SEWING DEPARTMENT.

April 1, 1939—March 31, 1940.

(1)	Flanelette Pyjamas		177 pr.
	(a) Size 14	12 pr.	
	(b) “ 16	103 pr.	
	(c) “ 18	20 pr.	
	(d) “ 20	42 pr.	
(2)	Cotton Crepe Nightgowns		165
	(a) Size 12	12	
	(b) “ 14	28	
	(c) “ 16	72	
	(d) “ 18	53	
(3)	Cotton crepe Pyjamas		4 pr.
(4)	Cotton Housecoats		45
	(a) Size 12	2	
	(b) “ 14	4	
	(c) “ 16	28	
	(d) “ 18	8	
	(e) “ 20	3	
(5)	White Cotton Slips		7
(6)	Dresser Scarves		94
	These were bound with different coloured materials.		
(7)	Aprons:		
	(a) Kitchen	91	
	(b) Domestic Science Laboratory	31	
(8)	Pot Holders		73
(9)	Tea Towels:		
	(a) Machine stitched	24	
	(b) Hand embroidered Grade 4, 5 and 6.	12	
(10)	Place Mats:		
	(a) Linen flowered place mats—hemmed.	30	
	(b) Hems prepared for hemstitching	60	
	(c) Linen place mats hem-stitched	58	
	(d) Linen mats, machine-stitched with D.M.C. threads as decoration	53	
(11)	State Bird Quilt finished size 83″ x 106″. Embroidered and stitched by Grade 7.		
(12)	Curtains: 2 pr. floor length.		
(13)	Bed sheets		17

(14) (a) Hospital Uniform, 1 green dress, 1 white apron and cap.
(b) Private School uniform—2 blue cotton dresses.
(c) Christmas Play costumes—1 black dress.
1 black blouse.
1 red skirt.
1 striped skirt.
2 kerchiefs.
1 sash.
(d) Wool skirt for little 12-year-old.

(15) Grade 7—(1939)—made cotton blouses, 15 complete.

(16) Alterations:

(a) New spring coats and suits	35
(b) New spring dresses	30
(c) New winter coats	35
(d) Old winter coats	33
(e) New silk dresses in fall	23
(f) New cotton dresses	4
(g) Tunics	7
(h) Kitchen uniforms	50
(i) Laundry uniforms	28

(17) Household linens mended and repaired.

O. A. Paladichuk,
Supervisor of Sewing Dept.

SUMMARY OF MEDICAL WORK.

April 1, 1939—March 31, 1940.

Admissions	87
Re-admissions	45
Re-checks	124
Hospital admissions	23
Days in hospital	41
Number of girls seen by doctor	704

Examination of:

Eye	75	Nose	2
Ear	13	Throat	20

T. B. Tests	162
Smears	164
Wasserman	125
Tonsillectomy	16
X-rays	34
B. M. R.	26
Syphilis	2
Tonsillitis	9
Urinalysis	112
Influenza	17
Poison Ivy	11

Treatment of nose bleed	12
Ulcer—nasal septum	1
Amenorrhea	1
Dysmenorrhea	1
Treatments	49
Colds	20
Douches	36

1 infected finger
1 lumbar puncture
Minor Operations
  2 incised abscesses
  1 " boil
  1 removal of mole
  1 sprained ankle
  7 immunizations against Diphtheria

During the year the health of the girls at the Ontario Training School for Girls, Galt, Ontario, has been good. There have been no cases of infectious diseases. All new admissions have had complete physical examinations, and any defects such as hypertrophied tonsils or dental caries have been promptly treated. Physical and other improvement in many of these cases has been very satisfactory.

R. S. Slater, M.D.,
School Physician.

SUMMARY OF DENTAL WORK.

April 1, 1939—March 31, 1940.

Patients at Clinic		587
Examinations only		176
Patients treated public charge		377
Patients X-Rayed		10
Number of pictures taken		29
Extractions		129
General Anaesthetics		6
Local Anaesthetics		149
Fillings		729
Pyorrhea Treatments		4
Prophylaxis		46
Other Treatments		33
Root Canals	17	
Partial Dentures	9	
Dentures Repaired	2	
Inlays	1	
Orthodontia	2	
Flap Operation	2	
	33	

Dr. Geo. A. Cowan.
Dentist.

PLACEMENT REPORT.

WESTERN ONTARIO DISTRICT.

Number of visits to girls		1,030
Attendance at Clinics and Social Agencies		128
Attendance at Court		2
Homes and jobs investigated		120
Girls under supervision, March 31, 1940		74
Girls attending High Schools		8
Girls attending Public Schools		11
Girls in Domestic positions		26
Girls in Beauty Parlors		2
Girls in Factories		10
Girls in Hospital positions		3
Girls in Store positions		1
Unemployed		5
Unknown		3
Other Institutions		4
Freeport Sanatorium	2	
Salvation Army Home	1	
Ontario Hospital	1	

Mileage—16,206.

MADGE E. BREWSTER.

PLACEMENT REPORT.

TORONTO AND EASTERN ONTARIO DISTRICT.

Girls under supervision March 31, 1940		87
Attending High Schools	6	
Attending Public Schools	13	
WORKING—Domestics	21	
Factory	10	
Hospital	2	
Office	1	
Waitress	2	
Unemployed	1	
Whereabouts unknown	6	
Girls in Andrew Mercer Reformatory	8	
" " Ontario Hospitals	17	
Visits to girls		1,499
Visits to others, clinics, social agencies, schools, etc., re girls		257
Attendance at court		7
Homes and jobs investigated		226

Mileage—19,633

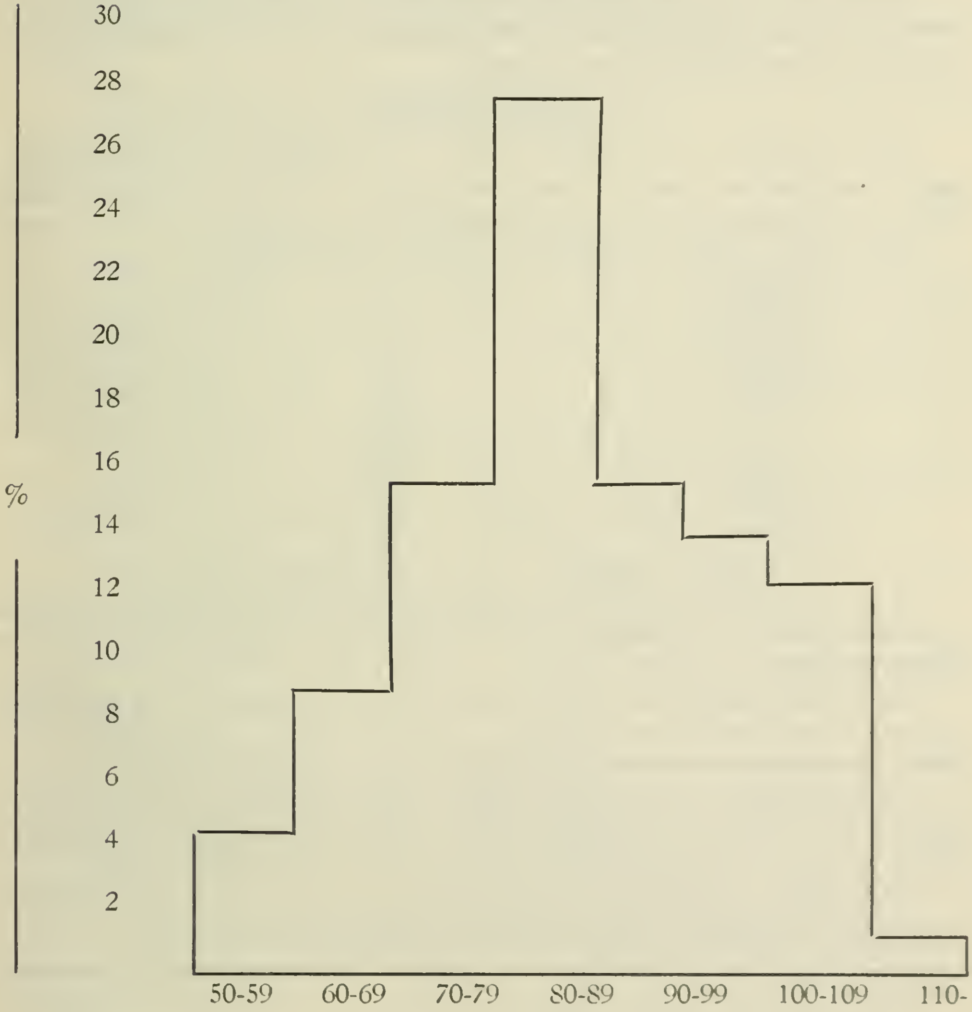
JEAN D. MURRAY.

All of which is respectfully submitted,

NELL WARK,
Superintendent.

DISTRIBUTION OF I.Q'S OF 87 GIRLS ENTERING TRAINING SCHOOL.

April 1, 1939—March 31, 1940.



Average I.Q=87.96.

REPORT OF THE ONTARIO TRAINING SCHOOL FOR BOYS, BOWMANVILLE

April 1, 1939 to March 31, 1940.

The year just ended has seen an expansion of the policy of "placement when ready". Younger pupils whose homes were not suitable continued their training in selected foster homes. This branch of placement shows a 25% increase over the previous year and has reached a new high of 153.

Paroles were 23% higher this year. No boy in residence at the end of the year had been in the School more than two years without placement.

Ninety per cent of the older group on parole were gainfully employed.

Increased use of the facilities for training afforded by the School was noticeable in an 11.3% increase in new admissions. It is noteworthy that re-admissions dropped 20.5% from last year.

Academic Report.

The organization of the school as far as the allotment of grades was concerned, remained the same for the above period. For the first time a regular class was organized for Grade 10 and the admissions included one Grade 11 pupil.

The average number of pupils in each grade was as follows:

Grade 11	1
Grade 10	6
Grade 9	12
Grade 8	36
Grade 7	38
Grade 6	28
Grade 5	20
Grades 3 and 4	16
Auxiliary	15
Full time academic	30 (Grades 1 to 6)

Boys of twelve years of age and under attended school the full day as well as a few who were not physically fit to do vocational work. School was in operation 5½ days a week.

As far as possible, the New Course of Study is followed and the results obtained, on the whole, were satisfactory. Out of a class of 29 Entrance candidates, 25 were successful—two of the failures being recent admissions.

During the year at the Durham Music Festival, the school was successful in winning the shield for Harmonica Band, gold and silver medals for Recitation, bronze medals for Baritone and Bass solos.

The orchestra continued the work commenced the previous year. The following was the schedule for Mondays when instruction is given:

9:15 a.m. Flageolet, composed of beginners and those who are awaiting instruments.

1:00 p.m. String Section composed of violins.

2:00 p.m. Wind Section.

3:00 p.m. Bugles with or without drums.

4:00 p.m. String and Wind Sections for orchestral work.

Tuesday and Wednesday evenings from 6:00 to 7:00 is spent in Bugle Band instruction.

Several creditable performances have been staged by above as a group or in solo numbers. The hour of 4:00 to 5:00 p.m. is set aside each school day for orchestra practice. Two members of the academic staff were in charge of this.

The circulation of library books during the past year was greatly increased. Apparently a greater stimulus for reading has been created among the boys. The number of books catalogued in the library is, 2,634, valued at $791.05. Eight new text and two sets of Canadian Social History Pictures valued at $5.65 were purchased. A gift of 46 used books was received and valued at $6.70. Twelve to fifteen books were sent weekly or when desired to each cottage. Considerable time was spent on repairing and arranging the books.

During 1940, a monthly programme has been presented by members of the various grades. This has uncovered talent and developed confidence in platform ability.

At the Hobby Show sponsored by the local Lions Club, the boys of the school were successful in being awarded some 25 cash prizes for their exhibits in art, collections, handicraft, etc.

REPORT OF PHYSICAL DEPARTMENT.

From the standpoint of work covered and results obtained the past year has been very satisfactory. The programme in physical education and organized sports, built up over a period of years, showed more concrete proof of its work than ever before. Subject material was well and happily received by the boys. While class periods followed a definite course of instruction, and were planned and purposeful, the response was enthusiastic and spontaneous.

Orthodox types of physical training were augmented by a programme of training in skills and fundamentals, designed to teach the boy how to play and to prepare him for full participation in all sporting activities at the school.

The annual outdoor demonstration in physical training was well attended. There were 8 numbers on the programme and 128 boys took part.

An interesting summer project was the construction of a dam in the creek which flows through the school property. Besides keeping the group interested and busy for the best part of the summer, it provided excellent facilities for outdoor swimming.

Just how fully the boys take part in organized sports is shown in the summary to follow. Every physically fit boy voluntarily joins a team and plays because there has been developed a desire to play. All-time records for number of games played in hockey, softball, and basketball were established during the year. Statistics reported do not include the innumerable practice games, inter-cottage games, and inter-shop games. Only regularly scheduled league games are reported. One game of hockey and eight games of basketball were played against outside teams. Such competition, however, is never stressed since efforts are directed towards an inter-mural programme in which all participate rather than feature games for small, select groups.

The Leaders' Corps was, as always, most vital to the smooth running of the entire programme. During the year 49 boys were members of this group. They wear a special uniform for all activities in the gymnasium, and meet one night each week for an advanced course of training. Much of the efficiency of our work would be lost without a well-ordered Leaders' Corps.

Periods of Instruction in the Gymnasium:

The following work was covered in the regular periods of instruction: Marching tactics, stressing posture, poise, rhythm, relaxation, Danish fundamental and corrective gymnastics, apparatus work on the horizontal bar, parallel bars, side horse, long horse, mats, and ropes; skills, drills and playing rules and systems of play in hockey, basketball, football, rugby, touchball, softball, volleyball; track and field athletics; stunts and group games.

Periods of Instruction in the Swimming Pool:

Instruction and drills in leg stroke, arm stroke, breathing, timing, rhythm, relaxation, racing start, racing turns, in the following swimming strokes: (a) crawl (b) back (c) breast.

Instruction and training in springboard diving.

Diving to recover weighted, submerged object.

General training for muscular development and stamina.

Championship Events:

Annual swimming and diving championships—18 events—37 boys competed in the preliminaries—26 boys competed in the finals. A new tank record was established in the one mile swim.

Annual gymnastic championships—132 boys competed in the preliminary round on four pieces of apparatus. This round also serves as a test to grade the boys on the year's work. All but the very small boys were examined. 30 boys competed in the semi-finals—14 competed in the finals.

Organized League Sports:

Softball—June league—19 teams in 4 graded sections—184 boys—104 games.
Midsummer league—19 teams in 4 graded sections—197 boys—175 games.
Total number of league games—283 (including games played in fall athletic groups).

Football—13 athletic groups in 3 graded sections—163 boys—91 games.

Basketball—Fall League—10 teams—65 boys—20 games.
Winter League—24 teams in 6 graded sections—174 boys—54 games.
Spring League—10 teams—67 boys—36 games.
Total number of league games—127 (including games played in fall athletic groups).

Hockey—24 teams in 6 graded sections—174 boys—81 games.

AGRICULTURAL REPORT.

General Farm Conditions.

Crops were generally good on the School Farm during the 1939 season. The main hay crop grown on the farm is alfalfa. This was a good stand and was cured under very favourable weather conditions. Fall wheat yielded over forty bushels to the acre. Corn, roots and potatoes were above average. The garden crops were the best in some years and provided an abundance of high quality vegetables for the School Dining Hall throughout the season.

Holstein Herd.

A very creditable herd of pure bred Holstein cows is being built up at the School. All heifer calves are being kept from the best cows for replacements. The herd has been entered in the R.O.P. under Federal Inspection, and the boys are quite interested in carrying on this work.

Out of a herd of fifteen cows only three have been below a yearly production of 10,000 lbs., the lowest being 8,940 lbs. of milk.

The herd is fully accredited from the standpoint of tuberculosis and also is now a Federally listed herd, all the cows having shown three successive negative blood tests for contagious abortion.

A new sire was purchased during the year. He is a well bred bull, his sire being the bull selected to head the Canadian Exhibit at the New York World's Fair in 1939.

Farm Apprentices.

One hundred and twenty-two boys were assigned to the School Farm during the year, and were given farm training. These boys voluntarily chose the farm as their vocational work. This continues to be one of the popular vocations. These boys become quite useful help around the farm. They are taught to milk, hitch and drive horses, work the farm implements, hoe and weed the garden and do all common farm jobs.

During the year fifty-nine boys were placed on outside farms under contract to work for wages. A large number of the younger boys, who had been given farm training, were foster placed in the country and proved to be helpful chore boys between school periods.

Vocational Agriculture.

Four periods a week were given over to class room instruction during the late fall, winter and spring months. These periods were devoted to the study of the following subjects:

Live Stock.

(a) Breeds and Breed Characteristics of all classes of farm stock.

(b) Care and feeding of live stock, stabling, kinds and quantities of feed to use.

(c) Judging dairy cows.

Dairying.

(a) Cleanliness and care of dairy utensils.
(b) Production of sanitary milk.
(c) Cooling and general care of milk to keep down bacterial count.
(d) Milk and cream testing.
(e) Daily weighing of milk from individual cows.

Field Crops.

Care and cultivation of common field and garden crops.

Rope Splicing.

(a) Long and short splices.
(b) Making up rope halters for cows.
(c) Attaching rope shanks to horse halters.
(d) Splicing hay fork ropes.

Classroom study of the above and related subjects serves to create an interest in the carrying out of the practical work. It gives an opportunity to explain the reason for many farm operations, that otherwise a boy may look upon as just being done to provide work.

Practical Agriculture.

The boys are taught to do all the common farm jobs that they will be required to do on the average farm. It has been found that this can best be done by having them assist with the general farm work from day to day. To this end they are divided in groups and work with, and under the supervision of the men on the farm staff. Farm training is ideal to teach a boy how to work. It requires that he put in a definite number of hours daily and stick to a job until it is finished. This is a new experience for most of them and tends to establish good work habits.

Farm Improvements.

Front and boundary fence posts repainted white.
Darch farm lane graded and tree stumps removed at sides of drive.
Grounds around Darch house and dairy barn graded, levelled and seeded.
Drains put in to take surplus water from barn yard.
Driveways between farm buildings graded and gravelled.
Concrete retaining walls put in at base of silo chute and new entrance made between stable and silo.
Somers' barn yard graded and levelled.
Dairy stable fittings painted pearl grey color and ceiling varnished.

Farm Production Summary.

Feed and Fodder	$2,899.00	
Garden and Orchard	1.531.19	
Livestock, Dairy and Poultry Products.	5,895.86	
Seed Cleaning	170.65	
	———	$10,496.10

HORTICULTURAL REPORT.

The work of the horticultural department can be classified into three divisions: (a) landscape work, (b) greenhouse work, (c) care of grounds.

Landscape Work.

Considerable work was accomplished in renovating the rockery at South Lodge. This was cleaned up, re-arranged and new rockery plants set out.

A new rockery was started on the bank east of the Triple Dormitory.

The east and west sides of the front entrance were given some attention. Trees were thinned out and trimmed on the west side and the ground levelled and seeded. The bank on the east side was built up, shrubs re-arranged, and flowers planted back of the stone work.

The perennial border at the front entrance was dug up and re-arranged, putting the taller growing plants at the back. Clumps of peonies and iris were divided and used to fill in the vacant spaces.

Base planting of shrubs around the Hospital Building was completed and two new flower beds were placed in front of the Administration Building.

Nursery plots for the growing of perennial plants were established and a variety of plants started. This will give an assortment of perennials for filling in the borders and rockeries.

Greenhouse Work.

The greenhouse is used to start early vegetable plants and annual bedding plants for the flower beds throughout the grounds. In addition to this, a seasonal display of potted plants, ferns and greenhouse flowers are grown for display.

Care of Grounds.

Over twelve acres of grounds and boulevards have been seeded and levelled so that they can be cut with the lawn mowers. Care of shrubbery, flower beds, and driveways also comes under this department.

Horticultural Apprentices.

Seventy-seven boys were assigned to this department during the year. They were given training in general greenhouse work: each boy having a section of a bench to start his own plants and care for them from the taking of slips up until the plants come in flower. They also get experience in the trimming of shrubbery, planting out flower beds and the growing and transplanting of thousands of annuals.

Classroom work includes: identification of varieties of plants, plant structures, how plants grow, soil requirements and demonstrations in propagation, taking of slips and cuttings, mixing potting soil, etc.

GENERAL MAINTENANCE SHOP.

For the year just ended considerable repairs were affected by welding and brazing. There were 738 welding and brazing repair operations on power equipment, steam and water lines, farm machinery, garden tools, and kitchen equipment. In addition this department has fabricated by welding two coal hoppers for the stokers in the power plant, clothes racks, pipe stands for clothing lockers in North Lodge, and the name plate brackets for the dairy barn.

In the Sheet Metal Section, some 60 soldering repair operations were completed on musical instruments, kitchen and dairy equipment. Manufactured smoke pipe for brooder stoves, 72 dust pans, 12 heavy garbage cans, galvanized sink for the greenhouse, eavetrough, ridge roll, chimney hoods for the Piggery and Dairy Buildings, 24 snow shovels, 12 water pails, funnels, and waste paper baskets.

This Shop also repaired farm implements, lawn mowing equipment, automatic stoker for the Power House; completely overhauled all garden tools and equipment; turned door stops, repaired motor bearings and bushings for the cylinders of a hydraulic pump, and built a snow plow for the school truck.

The painting program was lighter than last year with the painting of the living room, halls, stairs and bathroom, the back porch, steps and garages at the Superintendent's Residence; the single bed wards, lavatories, kitchen and hallways of the Hospital. The floors in the School Building were refinished and the farm machinery after being overhauled was painted.

Much work was done on the roads and the entire area surrounding the farm buildings. Telephone and light poles were removed and set up to conform with the general scheme. Old trees and stumps were taken out; drives widened and graded and lawns built up, levelled and seeded. During the winter months it was necessary to clear all school roads with the snow plow on several occasions.

A number of concrete projects were accomplished during the season, such as new side walks at the residence and the Somers' farm, retaining walls and floor of the silo, large section of the north wall, and footings at the residence, also a large slab at the garage entrances; three catch basins for the storm sewers and concrete tile. For this work it was necessary to haul some 140 truck loads of gravel from the lakeshore.

Other activities include the servicing of the school car and truck, replacing broken street lighting poles and equipment, installation of lights on North Lodge skating rink, water-proofing of foundation walls rear of school building, enlarging Jury Lodge play field, filling and grading in front of school building, building retaining walls at the bridge ends, hauling earth for flower beds, levelling of lawns, clearing drains, hanging awnings, caulking around door and window frames of buildings, sodding, removing stumps, etc.

Woodworking Shop Projects Completed:

50 additional folding chairs for Assembly Hall.
9 sets handles for hand bags for Auxiliary Class.
96 baseball bats.
12 Chinese checker boards.
12 blackboard rulers, 6 compasses, and 6 protractors for classroom use.
150 turned handles for lockers.
50 vegetable crates.
160 greenhouse flats.
6 pairs drumsticks.
Repair garden tool house.
Repairs to school chairs.
Repairs to tables, benches, lockers.
Refinishing school desks and classroom floors.
Making rollers for lawn mowers.
Painting of fence posts.

Shoe Repair Shop Projects:

Leather boots repaired	1,017
Hockey boots repaired	44
Rubbers patched	87
Belts sewn and rivetted	99
Harness repaired, lines, etc.	5
Baseballs, sewn	17
Mittens, sewn	18
Leather coats repaired	5

DINING HALL REPORT.

During the year 212,914 meals were served in the Dining Hall.

A total of 192 boys received training in dining hall work. 55 of these were given training in chef work, 129 as kitchen helpers and 8 boys were also given instruction in the pasteurizing of milk.

Boys interested in cooking were given practical training in the making of cookies, cakes, pies, preparation of vegetables, cutting and cooking of meats, and the making of desserts.

Approximately 30 boys are assigned as waiters at meal hours, and receive instruction in table setting, washing dishes and general cleaning up after meals.

HEALTH REPORT.

Dental Report

Number of patients at clinics	972
Number of examinations only	539
Patients treated at public charge	433
Number of extractions	212
Number of local anaesthetics (nerve blocking)	159
Number of fillings	979
Number of pyorrhea treatments	9
Number of prophylaxis	363
Other treatments	30
Number of porcelain crowns	7
Total number of operations	2,192

Medical Report

Number of boys at daily clinic	5,494
Number of boys seen by doctor	1,356
Number of General Physicals (new boys)	206
Number of re-admissions and monthly rechecks examined doctor	491
Number of patients in Hospital	376
Number of hospital days	1,686
Operations:	
Tonsils and adenoids	28
Appendectomies	2
Herniotomies	6
Circumcisions	4
X-rays:	
Chest	183
Accidents, etc.	62
Tuberculin Tests	501

PLACEMENT OFFICERS' REPORT.

Boys receiving supervision beginning of period		415
Boys discharged during period		297
Boys re-admitted to the School	66	
Released from guardianship	175	
Working on farms	65	
Attending School	204	
Employed in factories	23	
Employed as messengers	28	
Employed as truck helpers	4	
Employed at bush work	2	
Employed in restaurants	5	
Employed as watch-making apprentice	1	
Employed as printers' helper	1	
Employed as office boy	1	
Employed as salesman	1	
Employed at miscellaneous work	34	
Unemployed	19	
Boys in mental hospitals	8	
In sanatorium	1	
In Army	1	
In other institutions	52	
Whereabouts unknown	21	
	712	712
Boys discharged during the period		297
Placed in foster homes	90	
Placed on farms	59	
Placed in Working Boys' Home	20	
Home to attend school	46	
Home to seek employment	67	
To other institutions	15	
	297	297
Boys under supervision at end of period		471
Number of visits to boys		2,246
Homes investigated		234
Attendance at clinics and social agencies		77
Attendance at court		16
Other contacts		90

A. R. Virgin,
Superintendent.

REPORT OF ST. MARY'S TRAINING SCHOOL FOR GIRLS, TORONTO

April 1, 1939 to March 31, 1940.

The years mark time and Aprils loom on our horizons with alarming frequency. In the past, April did not have the significance which it assumes now, because the School worked placidly at history and made it but did not write a narrative about the making. History in the making is a living, dynamic force which stirs countless souls through successive generations. History in the narration, generally is lifeless, colorless, dull. Such narrative cannot be viewed as an isolated period. It unites backward, it unites forward. We trust that our readers will find momentary interest. Each day in its passage was freighted with weighty interests to the persons actively engaged.

In the group admitted for twelve months the foreign element was preponderant. In several instances this was tainted with radical views. A sense of uneasiness prevails when these young girls express their convictions. Deep and abundant are the roots of sedition and dis-loyalty; profane and un-christian is the language in which their thoughts find utterance. They are hostile toward Church and State, while Canadian ideals, freedom of thought, a protected and defended society have little appeal. They are addicted to lying and to stealing and there is an instinctive opposition to moral and religious training.

The academic course was satisfactory and there was a buoyancy or an eagerness which relieved monotony. A greater measure of good sense and intelligence was noted and there were fewer mental defectives. A more optimistic future is indicated here. The majority relish the lessons, lectures and instructions in Christian Doctrine and to these they give an absorbed attention. They are ready, always, to go to the chapel. Even the reluctance for early rising is vanquished by the desire for the solace and the comfort which, obviously, they find in the church. This should help them through the critical moments of life. The usual number passed the Entrance and a satisfactory group followed on with first year High School and commercial. They follow the course of the war with keen interest and understanding. They listen to the radio and to the press accounts read aloud in class with great attention. General discussions are not encouraged because of racial differences but their questions and their comments indicate reasoning powers in action.

The subject of discipline merits special attention. A fine spirit of class loyalty and devotion made rule and authority less restrained and more flexible. A friendly rivalry developed which tried to out-distance its neighbor in trustworthiness and obedience. This spirit communicated to others and it produced good results. There have been no escapes to report and there have been very few instances of corporal punishment. A silver thread of peace and harmony ran through the fabric of daily life.

Vocational training follows the lines traced in former reports. Older pupils are on the power machines and they make up all the wearing apparel needed by the children, all table and bed linen, all curtains and draperies. In the handicraft section excellent work is accomplished. One sees there decorated correspondence cards and calendars, articles of women's wear knitted and crocheted, hand made lace, embroidery, and a narrow tatting used for trimming on handkerchiefs and tray services. All acquirements of this kind are useful in home-making and as hobbies but they have less value in the duty of earning a livelihood. The wards who have married and who have homes take great care to make the home attractive. They describe to the last detail the various appointments and they rejoice over the fact that they can manage a household and make it pleasing.

To-day young girls face a harsh and perilous future. They have been born into an era devoid of the graciousness, the protection, the dignity of peace with order. Serene and secure living seems to them a fairy tale which they cannot vision as a settled and accepted mode of actual living. The children here listen with wide-eyed wonder to stories of domestic and home life in a working world of forty years ago. This points to a grievous social condition existing now and it is a handicap for youth in the race of life.

At regular intervals the moving and the talking pictures gave an evening's entertainment. The Royal tour stood first in favor, then Deanna Durbin, then Alpine adventures. They appreciate good music whether in the pictures, the radio or their own choirs. They saw colored slides of different lands accompanied by appropriate lectures. Every effort was made to banish weariness and boredom.

There was no serious illness to report and there was nothing contagious. Dr. Hamlin saw each pupil once a month and the medical charts are very complete. One child fractured her ankle and two others had operations for appendix trouble. The doctors who attended gave their time and their services most generously and we owe them a debt of profound gratitude.

The duty of supervision over paroled children was performed with as much excellence as possible. Lapses or broken paroles were few, comparatively. We are concerned about the marriages contracted because of youth. Sixteen, sixteen and a half, seventeen, are years which are lacking in a sense of responsibility and girls are very young and inexperienced to accept the obligations of marriage so readily. No doubt, it gives a degree of security and an anchorage. They visit the Convent regularly and apparently they have little apprehension about the future.

We welcome this opportunity to thank the Department under which our School operates and to thank each member of the staff. The cordial and sympathetic assistance, always ready, made the work easier and lightened many burdens. We thank, too, the Advisory Board for their kindness in accepting many recommendations and for their forbearance with the wards of the School.

We have the honor to remain,

Your obedient servants,
THE SISTERS OF THE GOOD SHEPHERD.

REPORT OF ST. JOHN'S TRAINING SCHOOL FOR BOYS, TORONTO

April 1, 1939 to March 31, 1940.

We are privileged to present our report covering activities and progress of the school during the past year. Consideration should be given to the fact that owing to limited space and proximity to the city itself, much has been accomplished, under conditions that do not prevail in other training schools in the Province.

Many and varied are the causes that result in boys being sent to our training centre. Adverse home conditions, questionable environments and evil company are among the prime factors that start the up and growing boy on the downward path. It is with a keen knowledge of these conditions, that our school and its understanding staff undertake the moral and physical build-up of the boys admitted to our care. We feel that a great deal of success has accompanied our efforts, as the following review will testify.

First and foremost in our endeavours is to impress upon the boys the value of religion. Many arrive here with little or no appreciation of things sacred. Fortunately, we are well equipped to look after the religious needs of our boys. A resident chaplain, daily Mass, morning and night prayers and Christian Doctrine are among the means employed to give him a better understanding of his religious duties and of the moral requirements of his daily life.

Health and physical fitness of the boys is absolutely essential to the progress of any school. In this respect we have been fortunate. Constant medical supervision under the able guidance of Dr. R. W. Boyden has eliminated the dread spectre of epidemics during this year. Many boys arrive underweight and undernourished, and after a remarkably short period of time the physical regeneration is often a surprise to the boy's parents. The general healthy vitality evidenced in our boys is frequently the first comment of visitors. Constant attention to their health requirements is a foremost concern of the school. Hospitalization and surgical treatment covering many and varied cases were supplied. During the year 34 boys benefited by tonsillectomy and 14 others were given surgical treatment for phimosis. One hernia was corrected, and one appendectomy was performed. Six cases of fractures, sustained during play, were given required attention. One boy required hospitalization for erysipelas, one for spinal meningitis and one for rheumatic fever. The recovery in each case has been satisfactory.

A weekly dental clinic, under the direction of Dr. W. H. Godsoe, is ever on the alert to ensure the highest in teeth protection. Daily brushing of teeth is a supervised activity. Details of the work accomplished are as follows: 261 amalgam, 56 synthetic porcelain and 17 cement restorations; 152 extractions under novocaine anaesthesia; 34 x-rays; 16 cases of dental surgery; 10 boys received treatment for pyorrhea and 10 surgery cases were performed at the Dentist's City office.

Elementary education is pursued to give the most effectual foundation for those of our boys whose capacity merits it. Many indeed show marked ability by passing the required Departmental examinations. Others are given a modified commercial and High School instruction. An opportunity class provides special academic training for those whose education has been seriously retarded. To those manually inclined, our shops afford an excellent outlet, and many boys become proficient in printing, shoemaking, tailoring, barbering, horticultural and bakery and culinary pursuits.

The maintenance staff accounted for many improvements, giving much impetus to the carpentering and painting trades. New panel ceilings in halls and class rooms, alterations to parlours and offices, additional safety devices for machines and motors, replacements of hockey and lacrosse cushions and needed fence repairs all made for better and improved conditions. Following a report from the Hydro Inspector a complete overhauling of electric wiring was affected.

One of the main factors in attaining the physical fitness of our boys is the excellence of our athletic program. Every boy is part and parcel of some activity in the realm of sports. After shops and classes, a regular bee-hive of competition in seasonal sports is in evidence in class games, rivalry among the shops and graded games for the smaller lads, all of which tends to promote a daily and constant topic of interest. In inclement weather the gymnasium is resorted to, and here on parallel bars and spacious mats all kinds of indoor activity become the order of the day. Monotony is evercome by variety. A well stocked library and stamp collection bureau provide a source of interest for many.

Our report would be incomplete without mentioning the prowess of our boys in various sporting outlets. Favoured as we are by expert and experienced coaches, great headway is annually made by our charges. Our affiliation with the Catholic Youth Organization permits our boys to compete on common grounds. Much prestige is gained and many valuable friendships and contacts made through this medium. Our colours and fame are known in many fields and rinks. Many cups and trophies are potent reminders of our successes in athletic lines. During the year, our boys have annexed championships in softball, hardball, lacrosse and rugby. Inevitably one or more of our teams find themselves in the play-offs. This year our Midgets captured the C.Y.O. Hockey Title after a long and arduous campaign, meeting crack teams from Midland and Toronto. Great interest is evidenced by our neighbours, who regularly throng our park to see our boys perform, thus stimulating them to greater efforts. Many visiting teams at their own request, engaged us in various games. This alone is evidence of the value others place on our athletic training.

Vacation time naturally calls for a varied and interesting program. After providing for half day shop work the remainder of the day was rounded out with Danish drill, dumb bells, field and track work, gymnastics, singing, harmonica playing, swimming, fretwork, stamp collecting and generous amounts of gardening. Individual hobbies were encouraged and assisted. Our boys also enjoyed three weeks of outdoor life at De La Salle Camp at Jackson's Point towards the end of the vacation season. Other outings included periodic visits to local theatres, to the Maple Leaf Stadium and Gardens, Varsity Arena and Canadian National Exhibition. Instructive and educational films were shown periodically. The Knights of Columbus acted generously at Christmas Time providing the boys with useful gifts and sweets as well as a high class entertainment. The pyrotechnic display on the 24th of May, an annual feature of the school, was enjoyed by the boys and admired by a large portion of our neighbours in the beach district.

Shortly after admission to the school the boy's home is visited by our Inspector. This visit often resulted in revealing conditions that have led to the boy's delinquency and quite frequently established friendly and co-operative relationship between the home and the school. Subsequent visits, in many cases, result in improving conditions that make for more successful placement when he appears ready for parole. Interest in his welfare does not terminate after he leaves the environment of the school. Directional supervision is constantly being given by our full time Placement Officer.

During the year 812 visits were made to boys under placement in their own homes, free homes, boarding homes and working homes. Boys on parole living in Toronto and vicinity made periodic visits to the school, this enables us to maintain a closer and more beneficial contact with them. Many of the boys, whose homes are more remote, kept in touch with the school by correspondence and not infrequently sought advice besides telling us of the progress they were making. Important aid in follow-up work was also rendered by Pastors, Children's Aid Officials and Big Brother Organizations.

The change in designation from the status of Industrial School to that of Training School has met with our whole hearted approval. Our entire program has been planned to prepare the boy for his return to normal home life as an asset to society. In these continuous efforts on behalf of our boys, the devotion and loyalty of our staff has been no small factor. To them and the Deparement of Provincial Secretary for their assistance we extend our sincere gratitude and appreciation.

Sincerely yours,

Brother Stephen,
Superintendent.

REPORT OF ST. JOSEPH'S TRAINING SCHOOL FOR BOYS, ALFRED, ONTARIO

Number in Residence, April 1st, 1939	110
Number in Residence, March 31st, 1940	119
Average Daily Attendance	112

Academic Report.

We had again this year four classes, doing good academic work. The pupils were distributed as follows:

Grades 8 and 9	18	
Grades 6 and 7	22	
Grades 4 and 5	27	
Grades 1 to 4	24	(All full time pupils)

In the higher grades, the average enrolment for the academic year is higher than the average registered last year. There is also an increase in the number of pupils in each grade, and we noticed that the children seemed to put more spirit and enthusiasm in their daily school task. Some of them, however, as usual, moved by easy stages only. We follow the programme of studies as closely as possible with the elements we have in our school. It is rather difficult to follow up any well-organized programme for many months, due to the fact that the scholastic year instruction is imparted in both languages, English and French. So far as English is concerned, the French-speaking pupils are better for Grammar, Spelling, Composition; the English-speaking, for Reading and Conversation.

One of the first things that we teach them is how to write a letter to their parents. The first letter they write is always to ask for something, often completely unnecessary. They want to have more spending money, and once this dough, as they say, is had, they don't bother any more about their parents. We try, by all means, to develop in their hearts sentiments of filial love and respect for their parents or guardians. Class is taught six days a week, with an hour on Sundays, employed in the teaching of elementary drawing and letter-writing. We bought for the lower grades seven "Treasury Readers" and seven "Work Books", four "Work and Play with Words". At recess, the boys of the lower grades, play together, enjoying either a football game or any game of their choice. The pupils gave three entertainments to which the school, the staff and the friends of the institution were invited, and so strong was the interest created that everybody seemed heedless of the drift of time. We organized four matches between two classes of about similar grades, in such subjects as, Spelling and Geography. It created plenty of emulation among the boys concerned, and greatly helped the teachers in their difficult work of educating backward pupils. During the year, we gave out the examination results publicly in the Assembly Hall; and the pupils themselves rendered an interesting programme, and the small school orchestra played a few of their best numbers.

Singing lessons were given as usual in all the classes, but specially in Grades three and four. As the teachers of those rooms are good singers, the pupils enjoyed to the full their singing lessons. We invited the instructors to give in each classroom very elementary elocution lessons to the boys in both languages; and in this way, we succeeded in correcting many defects and mistakes in pronunciation and articulation.

We had twelve interesting lectures given to the inmates of our training school, each one illustrated with lantern-slides. The Junior Red Cross Society is still in existence, but not working as well as before.

Some of the more progressive members of the academic staff inaugurated the publication of a school paper, "The Guide", in which are related the most striking events of the school for the period concerned.

Two companies sent their agents to our institution to give talking-picture entertainment on their respective industry. They are the "Ford Company" and the "Massey Harris Company". Moreover, several delightful entertainments were provided by visiting choirs, concert parties and Auxiliary Societies, every one of which was enjoyed by all the boys of the school.

Library Activities.

One the teachers of the academic staff took charge of the Library and succeeded in making it work to the satisfaction of all, instructors and pupils. The Supervisor of the reading room, as he is called, adopted the following scheme to develop in the boys a taste for reading, and interest them in his library. He devoted several days in cataloguing and placing in circulation not only the books of the Library, but also 500 magazines received from a friend of the institution. He put in each classroom two boys in charge of the books taken and to be returned to the Library. 110 pupils from the four classes of the school are interested in the Library movement, and benefit by the advantage of having a good organization at their disposal. About half of those boys read serious books. They are allowed to change their books twice a week on certain specified days. Once a month, the pupils are invited to give a written report of their reading, and the best essays are read aloud, and thus bits of knowledge are pooled for the benefit of all. The best works are also rewarded, a stimulation necessary to encourage the boys to put forth the efforts needed to write out a good essay. Twice a week in the School Review, we publish a list of the best or most interesting books and magazines in our Library. Thus the pupils get acquainted with some of the best modern books written on all kinds of subjects. The Library contains some 500 volumes.

Radio.

As radio concerts have some educating influence, we authorized the purchase of two radios. Of course, they are very popular and the boys rightly consider the hearing of radio programmes as one of their favorite pastimes. We put them in the dormitories, one in each, and at night, when the pupils are in bed or getting ready to retire, they may hear either a radio programme or listen to the exciting talks given over the radio about hockey games. The supervisors found out that this initiative had a beneficial effect on the boys and helped to maintain order and quietness. In one of the dormitories, the pupils themselves paid a good amount of the cost price, using for that, the coins that we give them from time to time, as a reward for their good behaviour and application to their daily work.

Religious Training.

Religious and moral training have continued to hold a place of paramount importance in our daily routine. As usual, we have regular classroom work in religious instruction, and on some occasions, lectures on ethical subjects of special importance, for the benefit of the whole school. The priest in charge of the moral training gives two formal talks a week; the first week in English, the second, in French. He is always at hand, and any boy may have recourse to him any time he wishes to do so. We secured the services of two devoted missionaries early in September to preach a spiritual retreat to the whole school; we divided the pupils into two groups, and they were permitted to follow the instructions given in the language they preferred.

We gave a weekly lecture to all the pupils, and we profited by this occasion to give general directions and make special observations. We succeeded that way in improving the behaviour of many boys, preventing their conduct from being too impulsive and erratic.

We know that religion builds firmly into the human structure, and consequently, we tried to render the religious services in the Chapel as attractive as possible. In October, His Grace Archbishop Forbes of Ottawa came to the school and gave Confirmation to fourteen boys. Three boys made their first communion on the same day. A banquet was served to the boys, the staff and a few invited friends to commemorate this exceptional event, and the confirmed boys and communicants were presented with a useful gift, as a souvenir of the ceremony. As the pupils receive singing lessons frequently, they are in a position to sing High Mass on Sundays, and help in the Vesper service. On Christmas Day, we had a Christmas tree prepared as usual for the occasion and decorated with 188 articles of all kinds. The ceremony around the tree was presided over by His Excellency Bishop Henri Belleau, first Apostolic Vicar of the newly erected See of James Bay. We avoid, as much as we can, any atmosphere of restraint in religious matters, and our aim is to act in such a way that the pupils enjoy the tutelage of religion.

Health Report.

A high standard of health maintained in the school is a matter of great satisfaction to the staff, and of no little pride to the attending physician. We had no serious case to report, except perhaps in February when a mild case of Scarlet Fever was found and the school quarantined for ten days. In order to immunize the rest of the boys, we had a hundred pupils inoculated with hypodermic injections, at the request of the Health Authorities. One boy broke his arm while playing, and the matter was attended to immediately. There were four tonsillectomies and one circumcision made. Our medical doctor is doing excellent work and his services are highly appreciated. He made during the year: 65 visits and 381 examinations. On the recommendation of Dr. Tittley, we authorized twenty-six boys to take milk between meals, twice a day, morning and afternoon. Our dentist made: 45 visits, 197 fillings, 313 examinations and 55 extractions. He frequently expressed his satisfaction at the way the pupils were taught to clean their teeth; and he found out that, owing to the wholesome food the children receive, they need very little medical attention after the first cleaning of the teeth has been done by him, when they become wards of the school.

Summer Camp.

So far, we could not easily send the pupils to enjoy the wholesome, healthful and invigorating air of a summer camp, because we missed the facilities afforded by a regular summer resort belonging to the school. But we succeeded in obtaining these facilities and we organized a permanent summer camp at Point Fortune, at the confluence of the Rouge and Ottawa Rivers, a distance of five miles from Hawkesbury, amid beautiful surroundings. It was formally inaugurated on July 3, with eighty pupils to start the camping activities there. The four separate cottages that we erected at Point Fortune were made by the boys themselves in their regular periods of manual labour. Those four camps are the dormitory, the kitchen, the refectory and a smaller private dwelling for the Chaplain. Over one hundred boys had the privilege of enjoying from two to three weeks at the camp, and so grateful were they of this favour that he had few slips of conduct to register. In fact, only ten boys asked to spend their vacation in their family; and twelve preferred to have one week at the camp, at least; and one week in their home. We broke camp on August 28, and resumed, at the school, the routine work of the year.

Physical Training.

As personality is the sum of habits we form, and as it depends pretty much on our general physical make-up, we placed considerable emphasis on our recreational programme not only as a means of activity, but as one of our most constructive training forces. The boys received regular periods of physical training throughout the year. The gymnastic class is made up of sixty-two athletes, divided into three groups, to keep every one busy and prevent desultory work.

First Group	22
Second Group	20
Third Group	20

During the dull season, gymnastic exercises are given four times a day, after breakfast, after the mid-day meal, at four o'clock, and after supper. We take only those boys who are physically fit, and who are willing to work hard in order to secure a great degree of efficiency and muscular development. However, a weak boy may, on his request, be allowed to practise any physical exercises consistent with his ability and power of endurance. Brother Eusèbe, their instructor, is very popular with the boys, and justly considers his work as an excellent means of education, to promote courage, decision and attention. This winter, we had two skating-rinks at the disposal of our 116 boys. 200 hockey games were played on our ice and a good many others, outside. Twenty teams were organized in the school and four hockey leagues, grouping young men from villages around Alfred, joined our organizations, and played on schedule with out best team, the Speed King. We thus succeeded in crystallizing valuable sympathies and friendship around the school. The Speed King played nineteen games during the season, and lost only four, the best record in years. We played against two Ottawa teams: The Guigues School team on our ice, and the La Salle, at the Auditorium in Ottawa. We played against senior players, and the team of the institution always made a good showing. Our players were invited by the president of the Ottawa City League to see a few games at the Auditorium, a splendid reward for our team.

The organized games, such as pass-the-ball game, generally start the hockey-training season, followed by exercises in the gymnasium and skating on the ice of a pond situated at about fifteen minutes' walk from the Main Building. As this pond freezes much earlier than the water on the rink, the pupils can enjoy their favorite game three weeks before the ice in the yard is ready.

We take pleasure in mentioning here the constant devotedness and striking ability of Brother Philip who looks after the ice in winter. It would be hard to find a better man to do the work, always ready, always willing to lend a helping hand, at any time of the day or night, to keep the skating-rink in perfect shape, so that the boys may have everything necessary to enjoy their winter games to the full.

For the first time in its history, the first baseball team of the institution participated in an organized league with teams from the vicinity and district, such as Calumet, Grenville, Hawkesbury, and L'Orignal. Our team won the championship title and the cup of the "Long Sault League". At the banquet that celebrated this event, we invited two members from each team, and we gave a substantial reward to each of our players. We have already started to organize our baseball schedule for the summer months, and the organization is well under way. The pupils take a great interest in those organized games, because of the social relationship connected with them. They are thus given the privilege of meeting young men, from other schools, whose influence is far from being undesirable. We were invited to give exhibition games at St. Jovite, Montreal's Stadium against Mount-Saint-Louis Institute, and at Cornwall, where our players had the privilege of seeing—a real treat—a professional baseball game at night, under the flood lights. One of our games was filmed and shown on the screen by one of the Cornwall artists.

The boys have to join the different gymnastic groups if they wish to participate in the organized games with outside teams. Last year, a few newcomers thought they could do away with that regulation, but they had to follow suit, and submit to the school laws.

A bowling-alley league has been started of late. This is what we might call a test-case, as this initiative has this purpose in view; to see if the boys, when left to themselves, can manage something, without receiving any help from the staff. We also began to give boxing lessons to some of the athletes of the gymnastic groups. The boys are allowed to practise boxing two or three times a week. We found out that those exercises produce good effects on the children. They give them backbone, self-assertiveness and confidence in themselves, but they don't make them more pugnacious, as some were inclined to think. Boxing also serves to settle difficulties that arise occasionally in a school like ours. When a quarrel takes place between two of the taller boys, they are allowed to ask for the gloves, a time is set for the meeting; in this way the fight takes a regular trend, and troubles of that kind are thus soon ironed out.

VOCATIONAL TRAINING.

Shoe Department.

The Shoe Department has been very active, as usual. We engaged a new instructor, who with the man in charge before, did good work. We had eighteen apprentices in this department, fifteen were full time workers. They employed five hours and a half every day, working three hours in the morning and two-and-a-half in the afternoon. Wednesday afternoons, and Saturday afternoons, are half-holidays. We always keep two apprentices in the same line of work; a skilled worker and a helper. The boys were employed in polishing the shoes of the staff and pupils, once a week. One boy was given a position in a shoemaker's shop with a salary of $8 a week, with board and lodging. The following machines were added to the outfit of the shoe-shop:

1 Heel Trimmer, at a cost of	$ 35.00
1 Sole Buffer and Naumkeag Machine	200.00
1 Reb Edge Trimmer	90.00
1 Machine Edge Setter	49.50
1 Knocking Machine	20.00
2 Racks	10.00
1 Show Case (For Samples)	20.00
1 Table with shelves (32 feet long)	12.50

The apprentices with their two instructors made 1,831 pairs of shoes and 75 pairs of skating boots. The maintenance work consisted in mending 912 shoes for the inmates of the house and 734 for customers.

Woodworking.

Thirty-one boys were apprenticed to this department. They made one large summer camp composed of a kitchen, a refectory, a private cottage and a dormitory of thirty-six beds in six rooms, six bunks in each one, three tables, 312 bird-houses of twenty different models, eight baseball bats, thirty-two tool handles, and eight lampstands. The principal work of the year was the construction of a new carpenters' shop, sixty feet long, forty feet wide, and twenty-four feet high, adjoining the wood-working shop already in existence, at a cost of $2,000, counting only the amount of material bought, not the time of the carpenters and apprentices employed in its construction. This shop has two storeys, not including the basement reserved for the furnace and fuel. The first storey is divided into three partitions; a machine shop, a working department and a wood shed, containing 40,000 board feet of wood, and a dryer or kiln. The second storey is set aside for the stock rooms, painting and basketry. The maintenance work included the repairing of 112 chairs, and all the woodwork done in the shoemakers' and tailors' shops. The headman of this department, Brother Anselm, deserves great credit for the splendid influence he has over the boys, his untiring zeal and his exceptional ability in everything that pertains to his work; drafting, designs, woodworking and basket-making.

Tailoring Division.

We have in this department two instructors, giving help to thirty-four apprentices, with eight full time workers. This division is credited with making:

125	Suits.
312	Trousers.
135	Night-shirts.
40	Coats.

We bought for the improvement of the machinery:

1 Overlapping Machine, costing	$225
8 Drawers for the Tables and Machines	30
Paid for Repairs	16

This department is also responsible for the mending of more than 245 articles of clothing every week. As usual, some of the ladies of the village devoted a certain amount of their time to the benefit of the boys in their accustomed work.

Bookbinding.

There are four apprentices working under the supervision of one instructor every afternoon. We outfitted this department with a cupboard with five sets of shelves to file the books. 209 books were rebound.

Metal Work Department.

From September 15 to March 10, the two boys learning the trade, and their instructor worked in the new carpenters' shop, doing all the jobs pertaining to their trade; the cement foundation, the chimney, the heating and water systems. They also made three sleighs, eight carts, and one trailer. The principal work of this department consists in keeping everything in good repair, specially the pipe system, the taps, the sanitary system in the Main Building, agricultural instruments. Moreover, they varnished the floor of the two dormitories, connected the water system of the house with that of the new carpenters' shop, thus putting under ground 150 feet of three-quarter inch pipes. They repaired shovels, scrapers, goals for the rink. They made forty spring-beds for the summer camp and repaired ten others. They connected eight taps in the wash-room and fixed a metal support 200 feet long for the pushing-bags, in one of the gymnasiums.

Miscellaneous.

The washing is done every week in our laundry by our employee and his two helpers. They have to wash the underwear of the 116 boys and the twenty-four members of the staff and servants. The pillow-slips are washed every two weeks, the night-gowns, every three weeks, the sheets every second week and the kitchen linen, every three days.

Canning.

We canned 1,300 gallons of vegetables, fruits, and preserves, distributed as follows:

Beans	350	gallons
Corn	50	"
Corn (on the cob)	50	"
Tomatoes	250	"
Preserves	5,000	" (plums, pears, peaches, melons, rhubarb, tomatoes).

The cost of the boxes amounted to $250.

We salted and smoked 250 pounds of ham.

We have a man in charge of the neatness in and around the Main Building. He has with him five, sometimes six boys, to help him in his work. He sees that the corridors are swept, washed and dusted carefully every day, the classrooms are swept every day, but washed only once a week.

Six boys work in the kitchen under a clever chef. Three work in the kitchen proper and learn the cooking and the baking trades. The other three are employed either in the washroom, the vegetable or the bread rooms. We bought a new motor for our Kelvinator at a cost of $200. Our refrigerator is now equipped with electric refrigeration and compressed air, instead of water and ammonia. Besides cooking for nearly 150 people, three times a day, the chef and his assistants have to bake between 140 and 150 loaves of bread daily.

During the summer time, seven boys work at the flowers around the Main Building, tidying up everything in front of the house. The 600 feet of hedge on the western and northern sides of the institution are trimmed and attended to by one of the instructors himself.

Agricultural Division.

Six boys work regularly on the farm, there are four more in summer. They are taught by three instructors. We had 2,000 feet of draining pipes put under ground, a necessary step to increase the production in the lower part of the property. A new field of two acres was cut, plowed and put under cultivation. We now cultivate 69 acres of vegetables, oats, etc., and thirty acres of hay. The Farm Products for the year were:

Potatoes	1,320	Bags
Carrots	22	"
Beets	10	Tons
Turnips	12	Tons
Tomatoes	400	Gallons
Beans	200	"
Cabbages	300	"
Hay	63	Tons
Cereals	1,200	Bushels
Ensilage	125	Tons
Onions	2,185	lbs.
Celery	1,000	Heads
Milk	9,852	Gallons

Number of swine killed during the year	29
Sum of money given to the Farm hands	$1,080.00
Amount of money given to the boys	62.40

Animals.

Horses	3
Cattle	27
Swine	40

At the Exhibition, the Farm obtained 19 Prizes, and 10 First Prizes.

Maple-Syrup Industry.

The maple-syrup season is very agreeable for the pupils of the school, and they enjoy it as much as they can. The season lasted three weeks, and the boys were permitted to have an outing at the sugar bush, and take their lunch at the log-cabin. We tapped 900 maples and kept almost all the maple-syrup we made for home consumption. Six boys work with one instructor, tapping the maples, gathering the sap, feeding the stove, and helping around as show-boys, at parties. Of course, we give them a chance to drink a few cupfuls of hot sap, from time to time. This is almost a necessity, as the boys, who gather the sap are always wet, from walking in the melting snow, and would certainly get sick without that stimulus.

PLACEMENT OFFICER'S REPORT.

Number of Visits to Boys	216
Boys Placed in Foster-Homes	16
Returned Home to Attend School	17
Given Positions	21
Enlisted	2

BRO. JEROME,
Superintendent.

STATISTICAL REPORT
TRAINING SCHOOLS ADVISORY BOARD

April 1st, 1939 to March 31st, 1940

NUMBER OF CASES REVIEWED

	St. Mary's Training School, Toronto	St. John's Training School, Toronto	St. Joseph's Training School, Alfred	Ontario Training School, Galt	Ontario Training School, Bowmanville	Total
Designations	39	59	49	86	201	434
Applications for Admission Approved	6	10	1	15	39	71
Applications for Admission Held for Consideration	—	—	—	—	3	3
Returns to School	4	22	33	43	58	160
Paroles recommended to Minister and made effective	42	88	93	176	377	776
Paroles Refused	22	11	4	4	14	55
Placement Reports	68	156	92	170	674	1160
Attendance Reports	168	213	220	164	293	1058
Wardship Terminated	19	33	32	24	168	276
Termination of Wardship Refused	—	—	—	—	2	2
Deaths	—	1	—	—	2	3
TOTAL	368	593	524	682	1831	3998

Number of Meetings held	52
Average number of cases reviewed at each meeting	77

TRAINING
COMMITTALS

For Year Ending

	Committed by Court	Admitted by Application	Total	Male	Female	City	Town	Township	Ages									
									8	9	10	11	12	13	14	15	16	17
Algoma District	7	...	7	4	3	4	3	..	..	..	..	..	1	..	3	3	..	..
Brant	4	...	4	3	1	2	1	1	..	..	..	..	..	..	2	2	..	..
Bruce	1	...	1	...	1	...	1	..	..	..	..	..	..	..	...	1	..	..
Carleton	19	1	20	16	4	19	...	1	..	..	..	..	3	4	7	6	..	..
Cochrane District	16	...	16	13	3	10	5	1	..	1	..	..	1	8	1	5	..	..
Elgin	3	...	3	2	1	1	2	..	..	..	..	..	..	..	1	2	..	..
Essex	20	1	21	14	7	19	2	..	..	..	..	1	3	5	10	2	..	..
Frontenac	6	1	7	4	3	7	...	..	..	..	..	..	..	1	2	4	..	..
Grey	3	...	3	2	1	1	1	1	..	..	..	1	1	..	1	...	..	..
Haldimand	1	...	1	1	...	...	1	..	..	..	..	..	..	1	...	...	..	..
Hastings	7	...	7	3	4	3	4	..	..	..	..	1	1	1	2	2	..	..
Huron	1	...	1	1	...	...	1	..	..	..	..	1	..	..	...	...	..	..
Kent	11	...	11	10	1	7	4	..	..	..	1	1	3	1	2	3	..	..
Lambton	9	...	9	5	4	8	1	..	..	..	..	..	1	1	1	6	..	..
Lanark	6	...	6	5	1	...	6	..	..	..	1	1	2	1	...	1	..	..
Leeds-Grenville	4	...	4	3	1	2	2	..	..	..	..	..	..	2	...	2	..	..
Lennox-Addington	1	...	1	1	...	...	...	1	..	..	..	..	..	..	1	...	..	..
Lincoln	4	...	4	2	2	3	...	1	..	..	..	..	..	1	...	3	..	..
Middlesex	12	1	13	5	8	13	...	..	..	..	1	1	..	1	5	5	..	..
Muskoka District	7	...	7	7	...	...	7	..	..	..	..	1	1	..	3	2	..	..
Nipissing District	13	...	13	7	6	4	7	2	..	..	..	..	..	1	4	8	..	..
Northumberland and Durham	4	...	4	4	...	...	4	..	..	..	..	..	..	..	1	3	..	..
Ontario	7	...	7	6	1	4	1	2	..	..	..	..	..	1	2	4	..	..
Oxford	5	...	5	4	1	1	4	..	..	..	1	1	..	..	...	3	..	..
Parry Sound District	1	...	1	1	...	...	1	..	..	..	..	..	..	1	...	...	..	..
Peel	2	...	2	...	2	...	...	2	..	..	..	..	..	..	1	1	..	..
Perth	3	...	3	1	2	1	2	..	..	..	..	1	..	1	...	1	..	..
Peterboro	3	1	4	3	1	4	...	..	..	1	1	..	..	..	1	1	..	..
Prescott-Russell	2	...	2	2	...	...	...	2	..	..	..	..	1	1	...	...	..	..
Prince Edward	1	...	1	1	...	...	...	1	..	..	..	..	..	1	...	...	..	..
Rainy River District	4	...	4	3	1	1	2	1	..	..	..	1	..	2	...	1	..	..
Renfrew	11	...	11	10	1	...	6	5	..	1	..	1	..	3	4	2	..	..
Simcoe	17	...	17	9	8	...	11	6	1	..	..	2	2	1	7	4	..	..
Stormont, Dundas and Glengarry	16	...	16	14	2	8	1	7	..	..	1	..	1	2	5	6	1	..
Sudbury District	18	1	19	15	4	11	5	3	..	..	..	..	2	2	2	12	1	..
Temiskaming District	10	...	10	5	5	...	6	4	..	..	..	2	..	4	2	2	..	..
Thunder Bay District	2	...	2	2	...	2	...	..	..	..	1	..	..	..	...	1	..	..
Victoria	5	...	5	4	1	...	4	1	..	..	1	..	1	1	1	1	..	..
Waterloo	12	...	12	8	4	9	2	1	..	..	..	..	2	1	2	6	1	..
Welland	10	...	10	7	3	4	3	3	..	..	..	..	..	3	3	4	..	..
Wellington	4	...	4	4	...	4	...	..	..	..	..	1	..	1	2	...	..	..
Wentworth	35	...	35	23	12	33	1	1	..	..	1	3	1	8	9	13	..	..
York	45	66	111	83	28	98	4	9	1	2	11	17	12	11	20	36	..	1
TOTAL	372	72	444	317	127	283	105	56	2	5	20	37	39	72	107	158	3	1

SCHOOLS AND ADMISSIONS

MARCH 31ST, 1940

	Ward of C.A.S.		Others		Cause of Committal or Admission											
	Legitimate	Illegitimate	Legitimate	Illegitimate	Arson	Assault	Armed Robbery	Breaking and Entering	Forgery	Immorality	Incorrigibility	Property Damage	Theft	Threatening	Truancy	Vagrancy
Algoma District	1	1	5					1			3		3			
Brant			4				1				1		1			1
Bruce	1										1					
Carleton		1	17	2				1		1	5		7		6	
Cochrane District			16					5			2		9			
Elgin			3								2		1			
Essex	6		15		1	2		2			11		4		1	
Frontenac	1		6					3			4					
Grey			2	1							1		2			
Haldimand			1								1					
Hastings			7					3			4					
Huron			1										1			
Kent			11					1			2		8			
Lambton	5		4							3	4				2	
Lanark			6			1				1	2	1	1			
Leeds-Grenville			2	2				1			1		2			
Lennox-Addington			1											1		
Lincoln			4						1		2		1			
Middlesex		2	10	1		1				3	5		4			
Muskoka District			7					3					4			
Nipissing District		1	12							1	4		4		2	2
Northumberland and Durham	1		3										4			
Ontario			6	1							3		4			
Oxford	2		3					1			3				1	
Parry Sound District			1								1					
Peel			2							1	1					
Perth	1	1	1								3					
Peterboro			4								1		2			1
Prescott-Russell			2										2			
Prince Edward			1								1					
Rainy River District			4							1			3			
Renfrew			10	1						1	3		7			
Simcoe	3		14					1		1	10		5			
Stormont, Dundas and Glengarry	1		15					2		1	3	1	8		1	
Sudbury District	3		15	1				4			5		10			
Temiskaming District	2		7	1				1		1	6		2			
Thunder Bay District			2										1		1	
Victoria	1		4							3	2					
Waterloo			12					5			3		3		1	
Welland	1		8	1				3			2		4		1	
Wellington			4					2					2			
Wentworth		3	31	1	1			2		2	9		16		4	1
York	13	1	83	14		1		3		1	50	2	32		17	5
TOTAL	42	10	366	26	2	5	1	44	1	21	161	4	157	1	37	10

SUMMARY OF ATTENDANCE IN TRAINING SCHOOLS

April 1st, 1939, to March 31st, 1940

	St. Mary's Training School for Girls, Toronto	St. John's Training School for Boys, Toronto	St. Joseph's Training School for Boys, Alfred	Ontario Training School for Girls, Galt	Ontario Training School for Boys, Bowmanville	Total
Number in Residence, April 1, 1939	72	138	110	81	214	615
New Commitments or Admissions	40	60	51	87	206	444
Returned from Parole:						
Violation of Parole	—	7	19	23	48	97
Not Satisfactory	3	1	6	4	10	24
Services no longer required	—	1	10	2	—	13
Pupils Dissatisfied	—	2	—	1	1	4
For Replacement	—	5	1	17	7	30
For Further Training	1	3	1	3	—	8
Court Order	—	4	—	—	—	4
Returned from A.W.L.	—	13	4	31	125	173
Total	116	234	202	249	611	1412
Number of Placements:						
Returned Home for School	1	12	21	2	46	82
Returned Home to assist parents	8	8	6	1	—	23
Returned Home for Employment	3	32	10	3	63	111
To Boarding Home	1	8	17	35	110	171
To Positions (farm, domestic, etc.)	13	16	21	57	59	166
To Other Institutions	9	3	4	17	14	47
Number A.W.L.	—	16	4	36	133	189
Total	35	95	83	151	425	789
Number remaining in Residence, March 31st, 1940	81	139	119	98	186	623

	St. Mary's Training School for Girls, Toronto	St. John's Training School for Boys, Toronto	St. Joseph's Training School for Boys, Alfred	Ontario Training School for Girls, Galt	Ontario Training School for Boys, Bowmanville	Total
Number remaining out for whole year	32	73	57	87	226	515
Number placed and returned during year	3	6	22	28	26	85
Placed out during previous years and returned during present year	1	17	15	22	40	95

RETURNED FROM PLACEMENT DURING YEAR

	St. Mary's Training School for Girls, Toronto	St. John's Training School for Boys, Toronto	St. Joseph's Training School for Boys, Alfred	Ontario Training School for Girls, Galt	Ontario Training School for Boys, Bowmanville	Total
After one placement	2	19	31	33	39	124
After two placements	2	3	5	12	22	44
After three placements	—	1	1	2	3	7
After four placements	—	—	—	2	2	4
After more than four placements	—	—	—	1	—	1
TOTAL	4	23	37	50	66	180

NUMBER OF COURT APPEARANCES PRIOR TO COMMITMENT OR ADMISSION

	St. Mary's Training School for Girls, Toronto	St. John's Training School for Boys, Toronto	St. Joseph's Training School for Boys, Alfred	Ontario Training School for Girls, Galt	Ontario Training School for Boys, Bowmanville	Total
None	25	13	11	62	65	176
One	9	17	21	14	55	116
Two	5	15	13	7	34	74
Three	1	6	—	3	24	34
Four	—	6	1	1	8	16
Five or more	—	3	5	—	20	28
TOTAL	40	60	51	87	206	444

NATIONALITIES OF PUPILS COMMITTED OR ADMITTED

	St. Mary's Training School for Girls, Toronto	St. John's Training School for Boys, Toronto	St. Joseph's Training School for Boys, Alfred	Ontario Training School for Girls, Galt	Ontario Training School for Boys, Bowmanville	Total
Indian	—	1	4	5	5	15
Hebrew	—	—	—	2	1	3
Negro	—	—	—	2	1	3
Canadian	40	50	32	48	192	362
Irish	—	—	7	1	2	10
English	—	—	1	14	—	15
Scotch	—	1	—	2	1	4
United States of America	—	1	—	4	—	5
Other	—	7	7	9	4	27
TOTAL	40	60	51	87	206	444

SCHOOL ROLL AND COMPARISON

	Bed Capacity	In Attendance Mar. 31, 1936	In Attendance Mar. 31, 1937	In Attendance Mar. 31, 1938	In Attendance Mar. 31, 1939	In Attendance Mar. 31, 1940
Ontario Training School for Girls, Galt	94	52	46	60	81	98
St. Mary's Training School for Girls, Toronto	85	65	59	62	72	81
St. John's Training School for Boys, Toronto	150	102	107	127	138	139
St. Joseph's Training School for Boys, Alfred	136	69	93	96	110	119
Ontario Training School for Boys, Bowmanville	224	172	188	192	214	186
TOTAL	—	460	493	537	615	623
Girls	—	117	105	122	153	179
Boys	—	343	388	415	462	444

	St. Mary's Training School for Girls, Toronto	St. John's Training School for Boys, Toronto	St. Joseph's Training School for Boys, Alfred	Ontario Training School for Girls, Galt	Ontario Training School for Boys, Bowmanville
Average length of stay in the School, per pupil	2 years 7 months	1 year 7 months	1 year 6 months	1 year —	1 year —
Net per diem cost per capita	$0.94	$1.00	$1.04	$1.29	$0.76

MENTALITY OF PUPILS COMMITTED OR ADMITTED

	St. Mary's Training School for Girls, Toronto	St. John's Training School for Boys, Toronto	St. Joseph's Training School for Boys, Alfred	Ontario Training School for Girls, Galt	Ontario Training School for Boys, Bowmanville	Total
Morons—I.Q. 45-60	3	3	4	4	7	21
High Grade Morons—I.Q. 60-70	5	7	9	8	12	41
Borderline—I.Q. 70-80	9	16	12	13	56	106
Dull Normal—I.Q. 80-90	9	11	17	24	54	115
Normal—I.Q. 90-100	8	12	6	13	41	80
Normal—I.Q. 100-110	6	3	2	12	20	43
Superior—I.Q. 110 and Over	—	8	1	13	16	38
TOTAL	40	60	51	87	206	444

FACTORS CONTRIBUTING TO DELINQUENCY OF THOSE COMMITTED OR ADMITTED

	St. Mary's Training School for Girls, Toronto	St. John's Training School for Boys, Toronto	St. Joseph's Training School for Boys, Alfred	Ontario Training School for Girls, Galt	Ontario Training School for Boys, Bowmanville	Total
Alcoholic Parents	2	1	—	1	2	6
Desertion in Home	—	8	—	5	9	22
Either parent immoral	2	—	2	8	4	16
Either parent mental defective	—	—	4	4	2	10
Either parent with court record	—	2	—	6	6	14
Father dead	1	5	3	3	24	36
Mother dead	1	7	8	15	13	44
Parents dead	—	—	1	5	5	11
Fair home but no Control	5	17	9	18	42	91
Poor Home and no Control	16	4	20	7	59	106
Stepfather	—	1	—	5	—	6
Stepmother	1	—	1	1	—	3
Parents Separated	7	2	3	9	17	38
Associations	—	10	—	—	16	26
Mentality of Child	5	3	—	—	7	15
TOTAL	40	60	51	87	206	444

ACTIVITIES OF RESIDENTS DURING YEAR

	St. Mary's Training School for Girls, Toronto	St. John's Training School for Boys, Toronto	St. Joseph's Training School for Boys, Alfred	Ontario Training School for Girls, Galt	Ontario Training School for Boys, Bowmanville
Full time in Classroom	30	21	57	24	89
Part time in Classroom	52	108	51	98	407
Full time in Vocational Shops	—	10	28	96	15
Part time in Vocational Shops	82	108	34	98	370
Culinary	45	19	12	194	192
Sewing	82	—	16	194	—
General Domestic	25	—	2	73	—
Hairdressing	6	—	—	23	—
Barber Shop	—	3	3	—	36
Carpentry	—	2	22	—	38
Farming and Horticulture	—	15	12	32	199
House Maintenance	—	8	4	218	64
Laundry	52	—	4	—	—
Metal Work	—	—	2	—	80
Office	—	—	—	6	5
Printing	—	13	—	—	—
Shoe Making and Repairs	—	28	18	—	69
Tailoring	—	30	26	—	—
Wood Working	—	—	8	—	83
Book Binding	—	—	3	—	—

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